The CONSTRUCTOR

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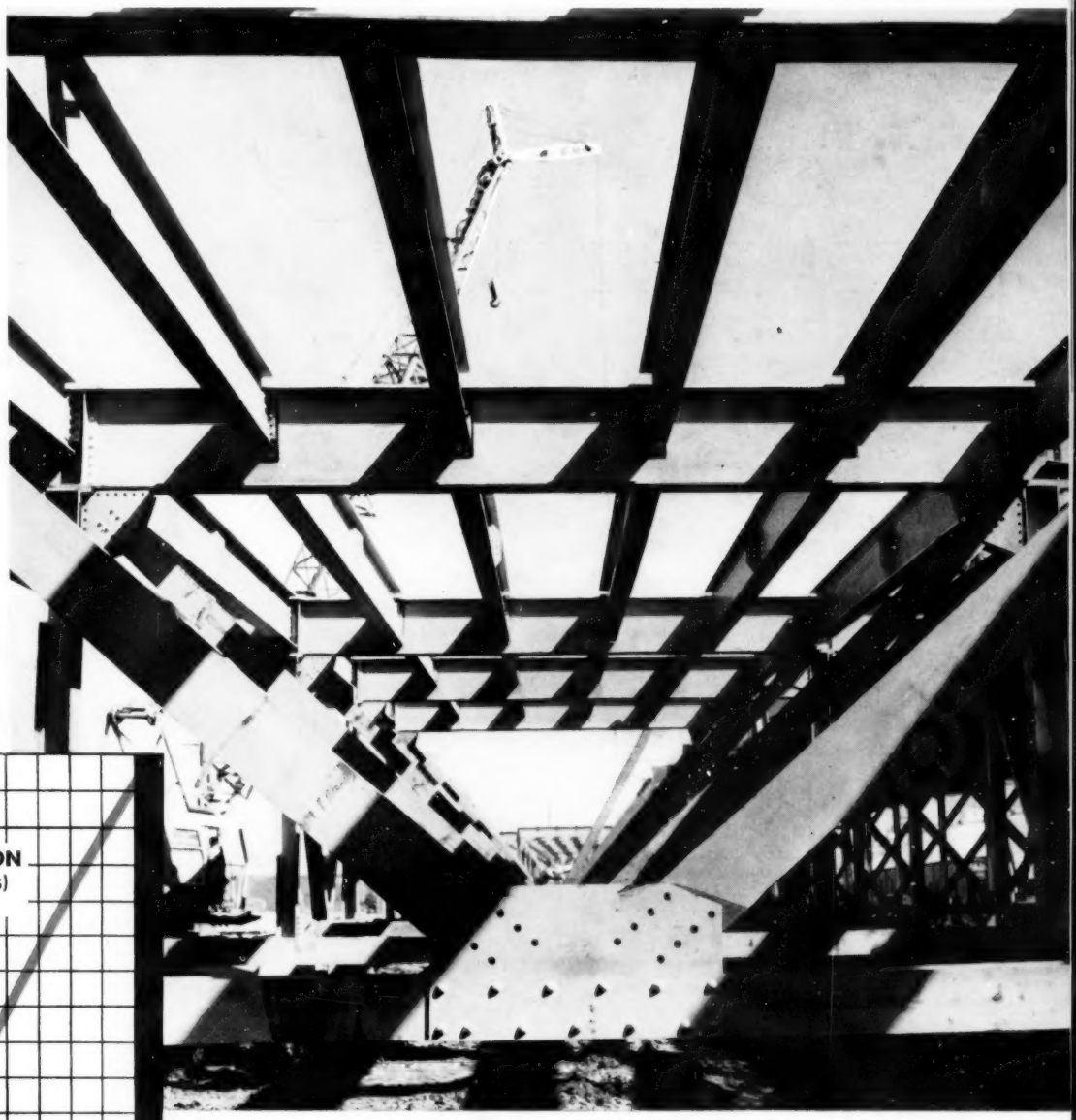
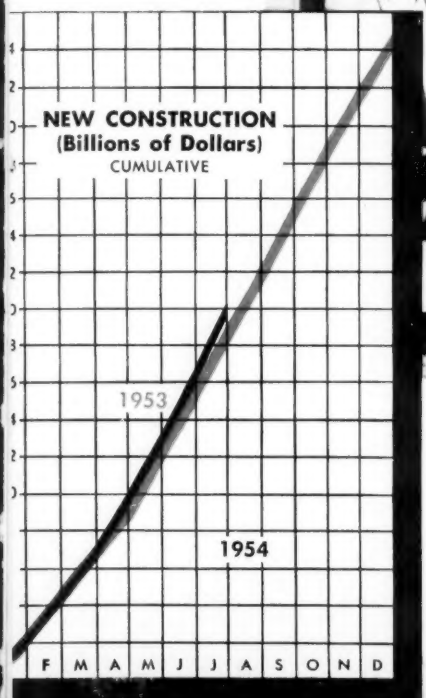
Volume XXXVI **AUGUST 1954** Number 8

- BUILDINGS
- HIGHWAYS
- AIRPORTS
- RAILROADS
- PUBLIC WORKS





Construction Seen as Economic Mainstay—7

Congress Passes Major Bills in Final Rush—23-28

President Suggests $50 Billion for Highways—37

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Cover

Patterns of steel symbolize the importance of construction in the steel market. The South Claiborne Street overpass shown under way here is one of two major structures in New Orleans' newly developing railroad relocation and grade separation project. The construction is being done by Farnsworth & Chambers Co., Inc., general contractors. Fabrication was by American Bridge Co.

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Shovel and earth mover at work on highway in Douglas County, Oregon

JOB-ENGINEERED FINANCE PLANS

Men and machines join forces on construction of U. S. Highway 99 in Douglas County, Oregon. Here a shovel and earth-moving unit of the R. A. Heintz Construction Co., Portland, Oregon, team up on this half-million dollar project.

Handling this job demanded a big boost in working capital to meet increased operating expense. R. A. Heintz, president, discussed his problem with C.I.T. who arranged a capital loan without delay.

Mr. Heintz reports that "C.I.T.'s promptness allowed me to proceed on this job immediately. And I'm repaying my loan out of income, without exhausting available capital."

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CIT

High construction volume continues as the brightest spot in the nation's economic picture by exceeding its own record of last year. The fact that construction has been the biggest single bulwark to the economy during this period of general business decline is increasingly recognized by leaders in business, government and economics (page 7).

New construction in July hit a seasonally adjusted annual rate of $37 billion, a new all-time high for any month, according to preliminary estimates by the Departments of Commerce and Labor. July volume of new construction put in place was $3.5 billion, up 5% over June and 6% over July 1953. Cumulative total for first seven months of 1954 was $20.1 billion, 3% above the same period last year (page 7).

Ten regular money bills totaling $42.7 billion were passed by Congress and sent to White House as the legislators rushed to complete the second session of the 83rd Congress and attack the business of campaigning before the coming elections. With the target date for adjournment extended by the Senate filibuster on atomic energy, several important measures were yet to be acted upon in the first week of August (page 26).

$50 billion for highways, over a 10-year period, in addition to normal road building, was proposed last month by President Eisenhower to the Governors' Conference at Bolton Landing, N. Y. Such a program, he said, is needed to serve a population of 200 million which is expected to be reached by 1970 (page 37).

Federal-aid highway funds totaling $875 million for fiscal year 1956 have been apportioned, Secretary of Commerce Sinclair Weeks announced recently. The apportionments, largest in the history of the federal-aid program, were announced several months earlier than usual and are available for commitment immediately (page 41).

A bill (H. R. 9835) to curb government operations which are in competition with private enterprise was passed by the House July 23 and introduced the next day in the Senate, where it was referred to the Committee on Government Operations (page 27).

The tax bill (H. R. 8300) was approved by House and Senate late last month and sent to the President. It makes a comprehensive revision of the tax laws. An analysis of the measure will appear in the September CONSTRUCTOR.

Housing bill signed into law by President Eisenhower, who, though unsatisfied with some of its provisions, described it as "a major advance toward meeting America's housing needs." Chief Executive said he thought the nation needed more generous public housing provisions and his office should have broader authority to adjust home loan terms to meet changing economic conditions (page 28).

Lease-purchase construction by the Post Office Department and the General Services Administration will be governed by careful selection of projects, keen competition among bidders and low interest rates to investors. The law, signed by President Eisenhower last month, permits these two government agencies to purchase public buildings by lease contracts ranging in terms from 10 to 25 years (page 45).

Improved statistics on construction were requested by the Administration in a supplemental appropriation request of $1,110,000 for the Departments of Commerce and Labor. Under provisions of the bill the two agencies could expand the collection and analysis of construction industry statistics (page 27).

Joint Cooperative Committee of A.S.C.E.-A.G.C. met June 29 in New York City and discussed the problems of unionization of professional engineers and the amount of field layout work contractors should undertake as part of their contracts (page 55).

Two regional meetings of the A.A.S.H.O.-A.G.C. Joint Cooperative Committee are scheduled for September. One will be held Sept. 16 at Sun Valley, Ida., as part of anual convention of Western Association of State Highway Officials. The other will be at Nashville, Tenn., Sept. 30, as part of annual convention of Southeastern Association of State Highway Officials. A.G.C. highway chapter managers from the areas will participate.

President Eisenhower last month appointed a Cabinet Committee on Transport Policy and Organization to review government policies and programs affecting all forms of transportation, under chairmanship of Secretary of Commerce Sinclair Weeks (page 39).

Selection of Skidmore, Owings and Merrill of Chicago as architects for Air Force Academy to be built at Colorado Springs, at a cost of $126 million, was announced July 23 by Harold E. Talbott, Secretary of the Air Force. Associated with the architectural firm are three engineering firms, Syska and Hennessy of New York; Moran, Proctor, Meuser and Rutledge of New York, and Roberts and Company of Atlanta. Mr. Talbott also announced appointment of Wallace K. Harrison of New York, Eero Saarinen of Detroit, and Welton Becket of Los Angeles, as consulting architects to advise him on Air Force Academy plans and construction.

Lockout is approved by National Labor Relations Board in case where board found employers faced with "threat" of strike. NLRB said shutdown of plants was "defensive and privileged" in this case (page 30).

Federal aid to schools in the amount of $250 million a year for the next two years was urged by representatives of 20 national groups who met with Commissioner of Education Samuel M. Brownell early this month. The group has asked Cogress to pass a bill sponsored by Sen. John S. Cooper (R.-Ky.) which would provide $250 million annually for the next two years to help states and communities construct badly needed classrooms.

Recent changes in assignments of Bureau of Public Roads officials include the following: George M. Williams from division engineer at Denver to assistant deputy commissioner in the Engineering Division in Washington; Karl S. Chamberlain from district engineer at Missoula, Mont., to division engineer at Denver; M. M. Flint from the San Francisco office of the bureau to acting district engineer at Missoula; W. D. Fish, who has been in the Washington office of the bureau for several years, to chief of the Construction Branch, replacing W. C. Peterson, who was recently named district engineer at Tallahassee, Fla.

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Greater speed

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High Construction Volume Continues as Mainstay of Nation's Economy

» WHILE the levels of business activity in general have declined from the all-time highs of 1953, the construction industry has continued throughout this year so far to furnish the brightest spot in the nation's economic picture by exceeding its own record volume of last year.

Since construction is the largest single production activity in the United States, it is a strong basic factor in the total economy, and its sustained high volume during the recent months of decline elsewhere has clearly been a major source of encouragement and stimulation to the nation's business as a whole. It has, in fact, proved to be the biggest single bulwark to the economy during this period.

Certainly if construction activity had dipped this year as much as other activities in general have done, the falling off in the economy would have been more pronounced. This fact is being increasingly recognized by leaders in business and industry, by government officials, and by economists, as many published statements have shown. There have been frequent references to the construction industry as the mainstay of the economy in this period of mixed business trends.

Helps Maintain Stability

In general, economic activity has now leveled off at a rate somewhat below that of last year, but still higher than in any year before 1953. Since construction accounts for about one dollar in every eight dollars of the gross national product—the market value of the nation's total output of goods and services—it has been largely responsible for maintaining the degree of economic stability that has been achieved.

Secretary of Commerce Sinclair Weeks at a press conference on July 29 said the economic outlook was "promising" at the midsummer point and cited the role of the construction industry in helping to maintain stability.

"Construction continues to be the mainstay of economic activity," Secretary Weeks said. "It has been rising steadily at more than seasonal pace. Judged by the high rate of contract awards, the building surge will continue strong throughout the summer."

The stimulus to the economy provided by the construction industry is varied and widespread, affecting employment and the consumption of materials and equipment, directly and indirectly, in many lines.

New construction in July hit a seasonally adjusted annual rate of $37 billion, a new all-time high for any month, according to preliminary estimates by the Departments of Commerce and Labor.

July volume of new construction was $3.5 billion, up 5% over June and 6% over July 1953.

Cumulative total for first seven months of 1954 was $20.1 billion, 3% above that for same period last year, $19.5 billion.

Gains over July 1953 were 10% in private residential construction, 13% in private nonresidential, 10% in public nonresidential (led by schools and hospitals), and 9% in highway construction.

Construction and Steel

As an example, the steel industry is heavily dependent on the construction market, and leaders in that industry have commented recently on the effects of construction on steel production.

Clifford F. Hood, president of United States Steel Corporation, addressing the 35th annual convention of The Associated General Contractors of America in March, referred to the construction industry as "the largest single user of steel in the nation."

Eugene G. Grace, chairman of the board of Bethlehem Steel Corporation, in a statement on July 14 said that the continuing strong demand for steel products by the construction industry would help to maintain steel output for some time to come.

"In at least four categories of construction—commercial building, nonresidential public building, bridges and highways—1954 promises to be a record or near-record year," Mr. Grace continued.

"In addition, the nation has a backlog of needed construction which should maintain strong demand for several years to come. By that time, it is reasonable to conclude that even greater demands will have been generated."

Taking 20 Per Cent of Steel

The American Iron and Steel Institute said in June that construction and contractors' products "are more than ever a mainstay of the steel industry." This market required 20 per cent of the direct shipments of finished steel in March, compared with 17.1 per cent in 1953 as a whole.

"When shipments of finished steel products are totaled for the 14 years 1940 to 1953 inclusive," the institute reported, "the 125.8 million tons received by the construction and contractors' product groups (including railroad and oil and gas construction) exceeds the total for any industrial category and is surpassed only by the 144 million tons shipped to warehouses." (Most of the steel shipped to warehouses goes into construction.)

Ahead of Last Year's Pace

"Construction requirements provide the brightest spot in the steel markets currently," says *Steel* magazine. "While other products are moving at noticeably slower pace than a year ago, demand for some building items is outstepping last year's pace. Structurals, sheet piling, reinforcing, guard rail and rope, and galvanized sheets are definitely pacing the market. And the strong demand extends to building specialties and tubular goods.

"Bridge and highway needs stand out. Meanwhile, commercial and nonresidential public building continues to contribute surprisingly strong support to expectations of, at least, a near-record in construction during 1954. . . .

"Large structural awards being placed right along assure high-level demand for building steel through remainder of this year. . . .

"Pending awards are fairly numerous. These brighten prospects for early term volume. At the same time, the longer term outlook is enhanced by a national backlog of needed construction believed sufficient to support strong building steel demand for several years."

Such statements as these indicate why the record-breaking volume of construction this year, in the face of a generally lower rate of activity elsewhere, has brought increasing recognition of the industry's economic significance and has contributed so importantly to reassuring the nation concerning the business outlook.

The all-time high seasonally adjusted annual rate of new construction reached last month, $37 billion, heightens further the industry's contribution. (See box on this page.)

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Blaw-Knox Telescopic Forms and Traveler for combined sidewall and arch pour of WEST VIRGINIA TURNPIKE tunnel, 28' 7" wide x 26' 0" high. This vehicular tunnel will be 2664 feet long and will be lined with 30,000 yards of concrete. As the inside surface will be faced with white tile, sidewalls are scarified for stronger tile bond by means of scoring wires welded to sidewall portion of forms.

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Consultation with Blaw-Knox form engineers at the prebidding stage and after-award stage assures the intensive planning of job methods and schedules that result in the correct type and quantities for the job, with assurance that work schedules will be maintained.

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A Series of Graphs Outlining the Construction Trend

Compiled by The Associated General Contractors of America

TREND OF CONSTRUCTION COSTS

The average of construction costs in the principal construction centers of the United States for July stands at Index Number 429 according to the A.G.C. Index. The cost figure for July 1953 was 411. The 1913 average equals 100.

WAGE AND MATERIAL PRICE TRENDS

The average of wages in the principal construction centers of the United States stands at 605 for July. One year ago the average stood at 575. The average prices paid by contractors for basic construction materials for July stand at Index Number 312. The average a year ago stood at 303. The 1913 average, again, equals 100.

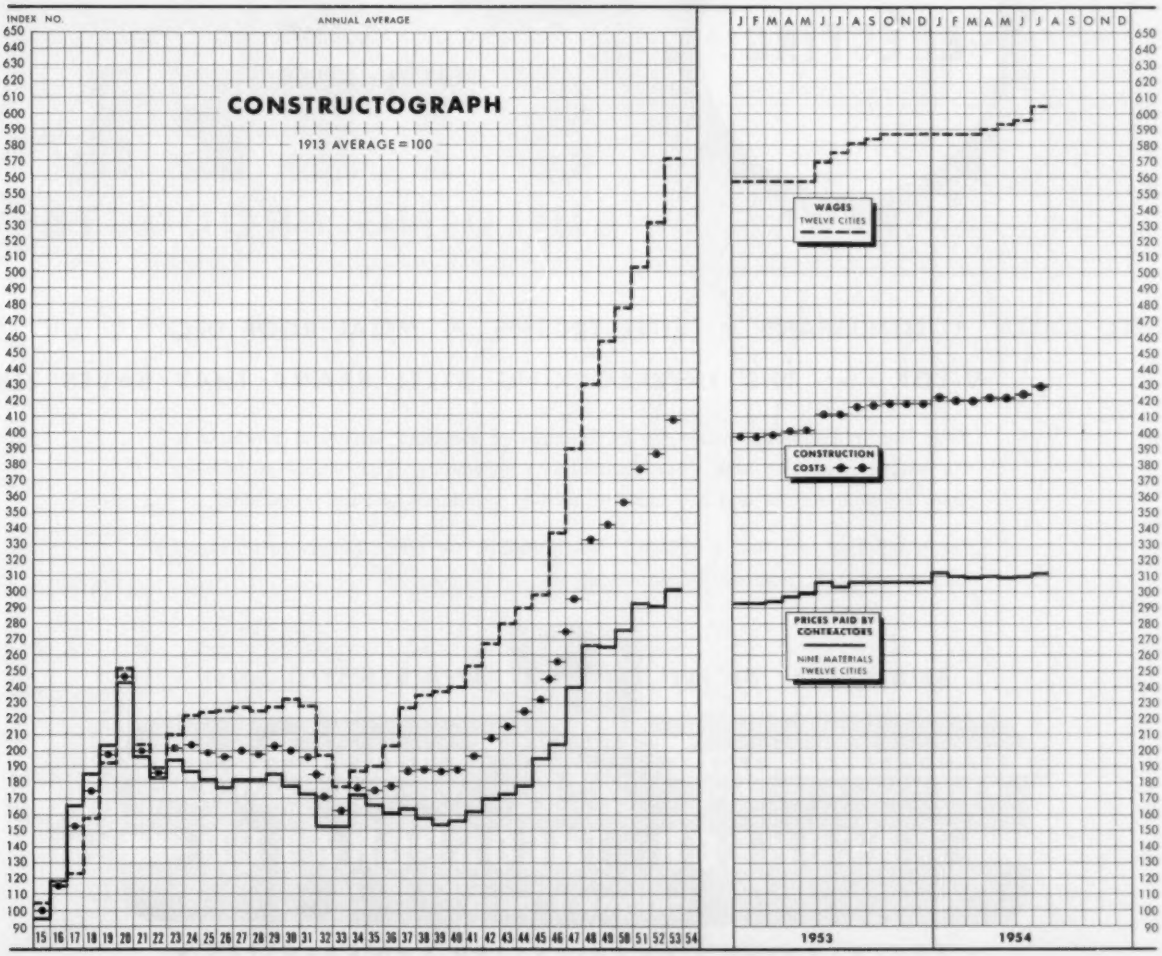
CONTRACT AWARDS IN 37 STATES

The volume of contracts awarded during June (Index Number 310, based on 1936-38) is a decrease of 36 points from May and an increase of 105 points from June 1953. (F. W. Dodge Corp.)

REVENUE FREIGHT LOADINGS

Revenue freight loaded during the first 30 weeks of 1954 totaled 18,928,034 cars. For the same period in 1953, loadings amounted to 21,890,572 cars. This represents a decrease of 13%.

● Wage, Material Price and Construction Cost Trends



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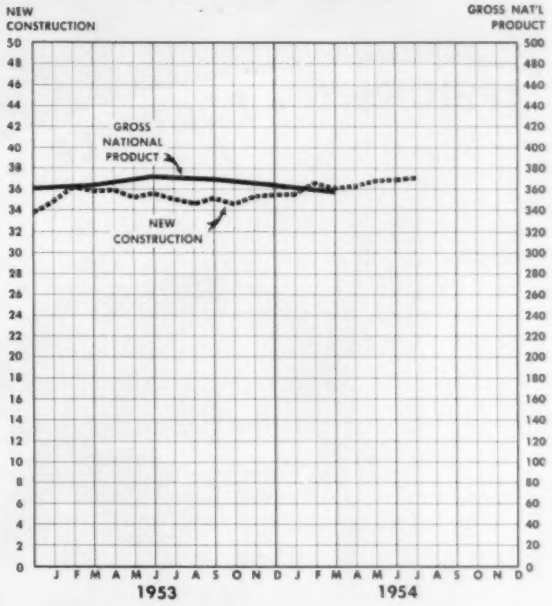
● TOTAL Construction Compared with Gross National Product

(BILLIONS OF DOLLARS)

DATA SUPPLIED BY DEPT. OF COMMERCE

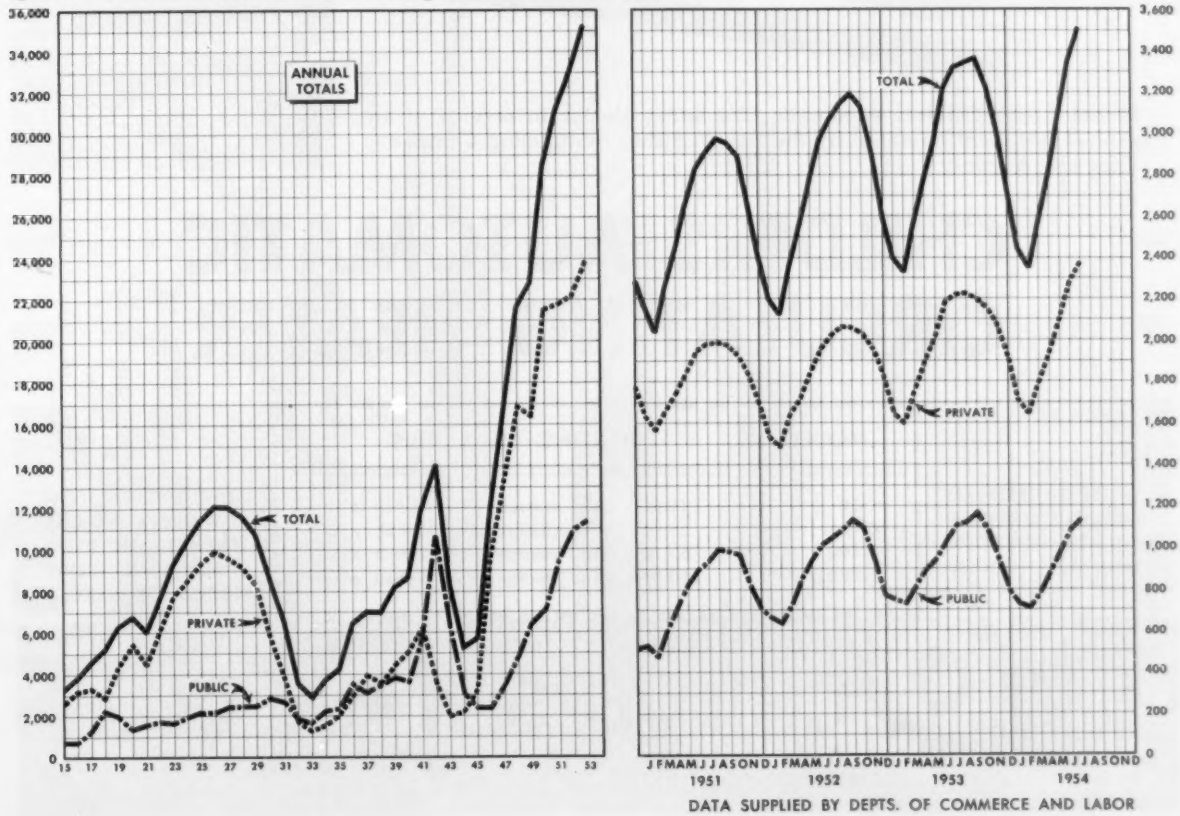
● NEW Construction Compared with Gross National Product *

(BILLIONS OF DOLLARS)



** Seasonally adjusted at an annual rate*

● New Construction Activity (MILLIONS OF DOLLARS)



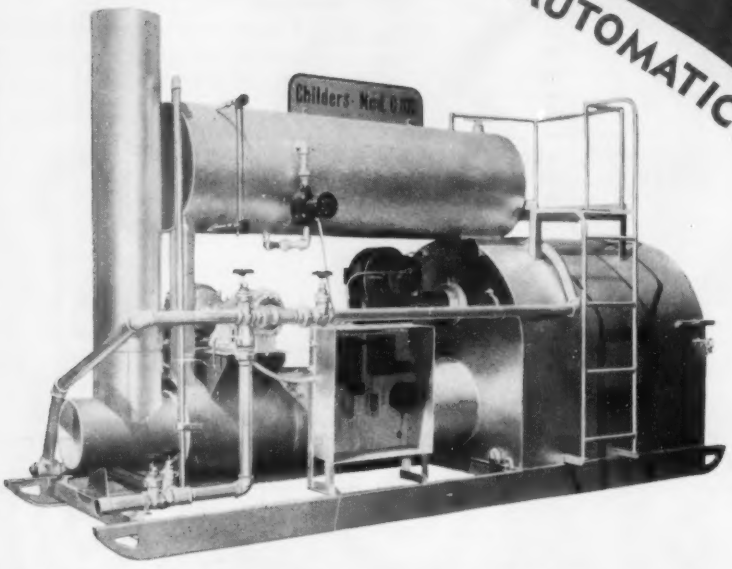
DATA SUPPLIED BY DEPTS. OF COMMERCE AND LABOR

CIRCULATING

HOT OIL HEAT

EFFICIENT • PORTABLE • AUTOMATIC

4 MODELS



Model C-100 Childers Automatic Circulating Heater in service at an asphalt hot plant operated by the Del W. Fisher Contracting Company, Phoenix, Arizona.

Especially designed for heating materials in asphalt plants, storage tanks, tank cars, and other applications.

Less expensive than steam!

CHILDERS AUTOMATIC CIRCULATING HEATER

NO

WATER OR PRESSURE
EXCESSIVE HEAT LOSS
HIGH OPERATING COST
BULK AND WEIGHT
BIG INVESTMENT

MODEL	HEATING CAPACITIES
C-50	15,000 Gals. storage plus asphalt plant
C-75	25,000 Gals. storage plus asphalt plant
C-100	60,000 Gals. storage plus asphalt plant
C-200 (Twin)	150,000 Gals. storage plus asphalt plant

YES

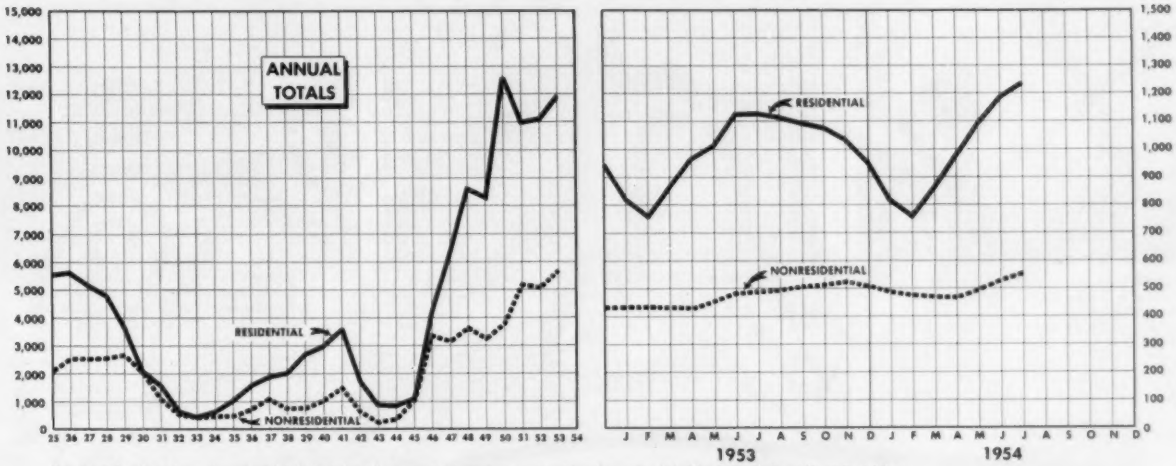
LOW ORIGINAL COST
LOW OPERATING COST
ENTHUSIASTIC USERS
BURNS ALL FUELS
MODELS FOR EVERY JOB

W. L. CHILDERS MFG. CO.

605 Euclid Ave. NW ALBUQUERQUE, N. M. Phone 3-7538

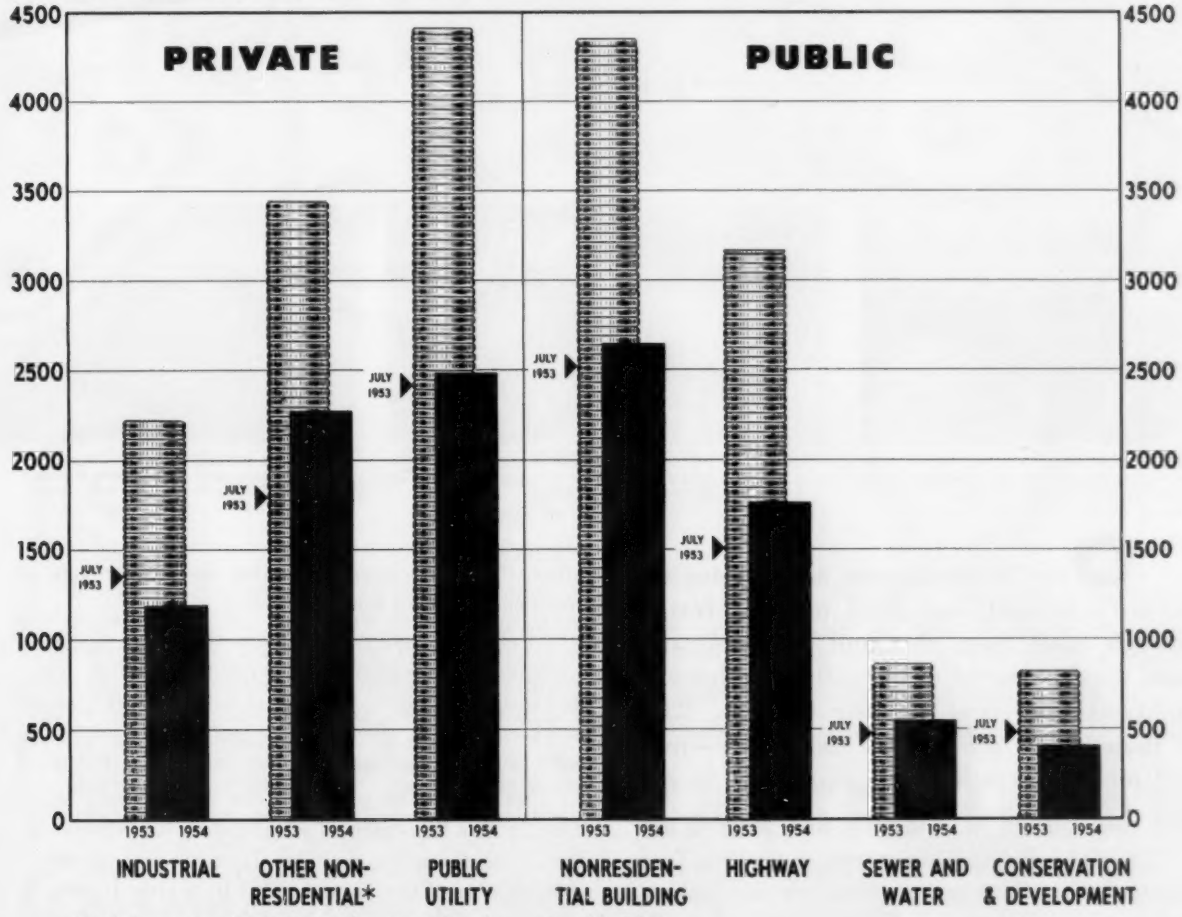
NEW CONSTRUCTION ACTIVITY

● Private Residential and Nonresidential Building * (MILLIONS OF DOLLARS)



* Residential excludes farm; Nonresidential includes industrial, commercial, institutional, and social and recreational building, but excludes public utility building.

● Selected Types: (CUMULATIVE, MILLIONS OF DOLLARS) 1953, 1954 VOLUME THROUGH JULY



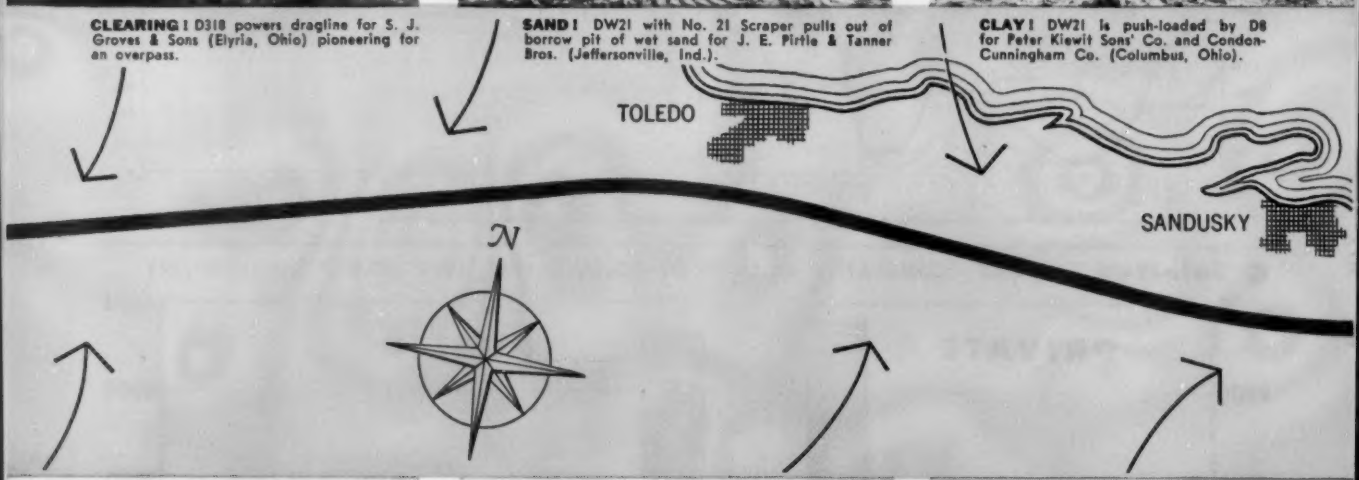
*Includes commercial, institutional, and social and recreational building

Across the board ...the choice is

CLEARING! D318 powers dragline for S. J. Groves & Sons (Elyria, Ohio) pioneering for an overpass.

SAND! DW21 with No. 21 Scraper pulls out of borrow pit of wet sand for J. E. Pirtle & Tanner Bros. (Jeffersonville, Ind.).

CLAY! DW21 is push-loaded by D8 for Peter Kiewit Sons' Co. and Condon-Cunningham Co. (Columbus, Ohio).



MUD! D8 equipped with No. 8A Bulldozer working in clay at overpass for V. N. Holderman & Sons (Columbus, Ohio).

DRAINAGE! D8 with No. 80 Scraper maintains ditch alongside fill on Winston Bros. Co. (Minneapolis) contract.

HAUL ROADS! No. 12 Motor Grader maintains road for Holloway & Thompson Construction Co. (Livonia, Mich.).

Over 50 contractors are pushing the nation's newest turnpike to completion through sand, bog, clay and rock. As one man, they've turned to big yellow equipment. Eighty-five per cent of their crawlers, 83% of their motor graders are Caterpillar—over 650 pieces of earthmoving equipment in all!

The roster of contractors at work on the Ohio Turnpike reads like a blue book of America's road builders. And from one end of this $326 million road to the other, they have given Caterpillar the biggest vote of confidence in road building history.

Collectively they have more than 650 pieces of Caterpillar-built earthmoving equipment on the job—and that doesn't include scores of CAT* Diesel Engines and Electric Sets. *They have far more Caterpillar equipment at work than all the other makes put together!*

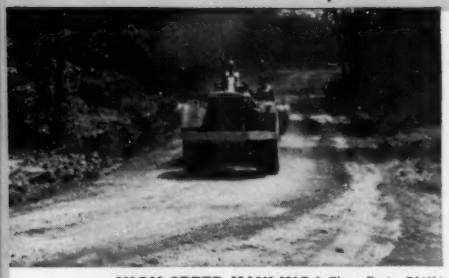
Yet there is no pattern in the type of work being done by this tremendous fleet of Caterpillar equipment. For on its 241 miles, the Ohio Turnpike presents every possible type of terrain and soil—from river bottom to mountains, from quicksand and bog to clay and rock.

on the Ohio Turnpike Caterpillar

QUICKSAND! D8 push-loads DW21 and No. 21 Scraper in quicksand over blue shale for Ralph Myers Contracting Corp. (Salem, Ind.).

ROCK! D8s in tandem push-load DW21 and No. 21 Scraper in rocky soil for R. B. Potashnick (Cape Girardeau, Mo.).

LONG HAULS! DW20 with W20 Wagon carries shale and rock on a *four-mile haul* for Frank Mashuda Co. (Milwaukee).



HIGH-SPEED HAULING! The first DW21 ever built still does high-speed hauling for Nick Cenci & Sons (Columbus, Ohio).

CRUSHING! D8 loads portable gravel plant powered by D337 for W. J. Menefee Construction Co. (Sedalia, Mo.).

GUMBO! No. 90 Scraper, pulled and push-loaded by D8s, works in gumbo for Harrison Construction Co. (Pittsburgh).

It is an amazing demonstration of the versatility of big yellow equipment. There are 450 Cat track-type Tractors alone.— *346 are D8s!* That represents 85% of all the crawlers at work on the project. Eighty-three per cent of the motor graders at work are Caterpillar, and 60% of the rubber-tired tractor-scraper units.

Heavy-duty, dependable Cat Diesel Engines are powering draglines, clamshells, shovels, backhoes, crushers, compressors, loaders. And through long, dark second shifts, Caterpillar Electric Sets are producing the electricity for flood-lighting and contractors' service shops.

Never before has there been such a testimonial to one make of equipment as this 650-unit fleet. Now's the time to follow the lead of road building leaders.

Start standardizing on Caterpillar equipment!

Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

CATERPILLAR*

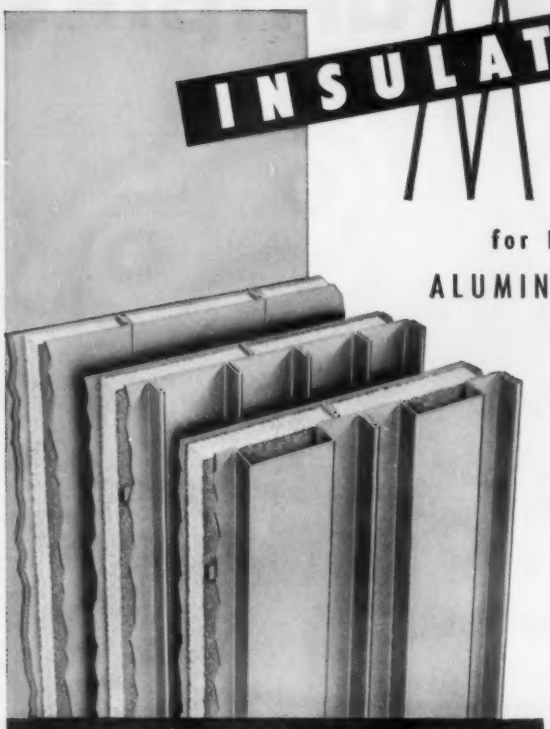
*Both Cat and Caterpillar are registered trademarks—®

WORLD'S NO. 1 ROAD BUILDER

INSULATED METAL WALLS

for INDUSTRIAL and COMMERCIAL BUILDINGS

ALUMINUM, STAINLESS or GALVANIZED STEEL



FLUSH, RIBBED, or FLUTED
Over-all "U" Factor of Various Types is Equivalent to or Better than Conventional 16" Masonry Wall

The swing to metal exterior walls is now recognized as the trend by leading designers throughout the country. This acceptance is more than justified by the attractiveness and permanent beauty of Stainless Steel or Aluminum exteriors. Whether used exclusively or in combination with brick or other materials, striking design effects are possible in virtually any type of building—the manufacturing plant below is typical. The decorative aspects of Metal Walls, however, are the least of their outstanding advantages over other types of construction. Substantial building economies can be realized through lower material cost, lower labor cost, and the cumulative savings resulting from reduced construction time . . . buildings can be quickly enclosed with Insulated Metal Walls—even under extreme low temperature conditions which would preclude masonry construction. Other important factors to be considered are the light weight of these modern curtain walls and the maintenance-free permanence of Stainless Steel or Aluminum exterior surfaces. Mahon Insulated Metal Walls are available in three exterior patterns shown at left. Mahon "Field Constructed" Fluted or Ribbed Walls can be erected up to sixty feet in height without a horizontal joint—a feature of Mahon Walls which is particularly desirable in auditoriums, powerhouses and other types of buildings where high expanses of unbroken wall surface are common. See Sweet's Files for complete information or write for Catalog No. B-54-B.

THE R. C. MAHON COMPANY

Detroit 34, Mich. • Chicago 4, Ill. • Representatives in All Principal Cities

Manufacturers of Insulated Metal Walls and Wall Panels; Steel Deck for Roofs, Partitions and Permanent Concrete Floor Forms; Rolling Steel Doors, Grilles and Underwriters' Labeled Rolling Steel Doors and Fire Shutters.

MAHON

For Moderate Income Families in Large Cities

(Formerly referred to as the "Cost of Living Index," compiled by the Bureau of Labor Statistics)

Continued rising food costs in most U. S. cities during June advanced the Consumer Price Index 0.1% to within 0.3% of the all-time high of 115.4 set last October, the Bureau of Labor Statistics announced.

Based on the postwar average of 1947-49, the "all items" index stood at 115.1, 0.5% higher than a year ago and 13.1% above the pre-Korean level.

Advancing for the third consecutive month, food prices reflected normal seasonal fluctuations with fresh fruit rising 7%, potatoes 27%, and coffee 2½%. Fresh vegetable costs dipped 2% while eggs and poultry fell 1½%, and dairy products nearly 1%. Meat prices declined slightly as lower bacon and ham prices offset a rise in the cost of pork chops and beef. Food prices are expected to remain high throughout the summer.

Average prices of other commodities and services were stable. Higher costs for home maintenance cancelled slight decreases in gas bills and some electrical appliances.

Ewan Clague, commissioner of BLS, said that the June change was "so near stability it's insignificant."

For the first time since World War II, the index did not show an increase in rents.

The Consumer Price Index, formerly calculated on the base 1935-39=100, was converted beginning last year to the new base 1947-49=100 in compliance with recommendations of the Bureau of the Budget.

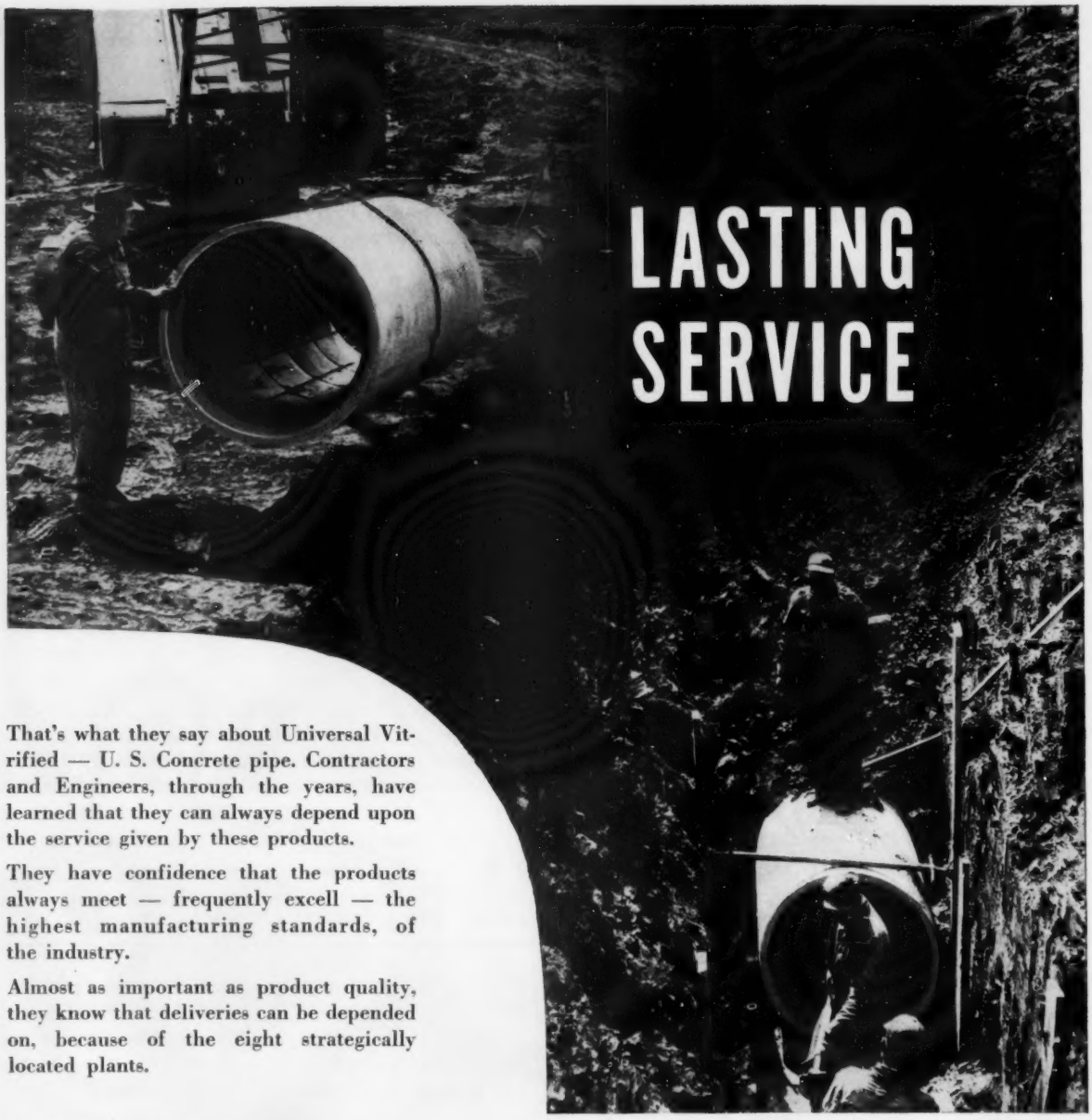
A portion of this index below indicates the average changes in retail prices of selected goods, rents and services bought by the average family of moderate income from April 15, 1952 to June 15, 1954.

They are presented here for use by employers who may wish to take these cost of living data into consideration when contemplating adjustments of wages based on increased living costs.

Aside from the change of the base years, the revised index includes prices of about 300 items, compared to some 200 for the previous index. The "weight" assigned to items is now based on facts concerning family expenditures of wage earners and clerical workers found in a survey of consumer expenditures conducted by the bureau.

The first five cities in the table below are checked and reported on monthly. The other 15 cities are surveyed and their indexes published quarterly.

	1952			1953			1954		
	APR.	MAY	JUNE	APR.	MAY	JUNE	APR.	MAY	JUNE
Average	112.4	113.0	113.4	113.7	114.0	114.5	114.6	115.0	115.1
New York, N. Y.	110.9	110.7	110.9	111.1	111.4	112.0	112.5	112.9	112.9
Chicago, Ill.	113.4	114.3	114.9	114.2	114.6	115.3	116.5	117.3	117.3
Los Angeles, Calif.	114.6	114.5	114.8	115.6	115.3	115.4	115.7	115.9	115.7
Philadelphia, Pa.	113.1	113.2	113.6	113.7	113.8	114.6	115.1	115.3	115.9
Detroit, Mich.	113.6	113.6	113.9	115.2	115.8	116.6	116.7	116.9	117.1
Atlanta, Ga.	.....	114.6	.....	.....	.....	117.1	.....	.....	117.6
Baltimore, Md.	.....	.....	113.0	.....	.....	115.1	.....	.....	115.5
Boston, Mass.	111.1	111.7	112.0	111.7	.....	.....	112.9	.....	.....
Cincinnati, Ohio	111.9	112.5	112.9	.....	.....	114.5	.....	.....	114.2
Cleveland, Ohio	.....	113.1	.....	.....	113.7	.....	.....	115.3	.....
Houston, Texas	115.0	114.8	114.9	.....	116.8	.....	.....	116.7	.....
Kansas City, Mo.	113.9	.....	.....	114.3	.....	.....	115.5	.....	.....
Minneapolis, Minn.	.....	.....	114.9	115.1	.....	.....	116.3	.....	.....
Pittsburgh, Pa.	112.3	112.4	112.2	112.8	.....	.....	114.5	.....	.....
Portland, Ore.	114.7	.....	.....	115.4	.....	.....	114.8	.....	.....
St. Louis, Mo.	.....	.....	115.5	.....	.....	115.8	.....	.....	117.4
San Francisco, Calif.	.....	.....	114.9	.....	.....	116.1	.....	.....	116.8
Scranton, Pa.	.....	112.1	.....	.....	112.0	.....	.....	112.3	.....
Seattle, Wash.	.....	114.6	.....	.....	116.2	.....	.....	116.3	.....
Washington, D. C.	.....	112.6	.....	.....	113.5	.....	.....	113.7	.....



LASTING SERVICE

That's what they say about Universal Vitrified — U. S. Concrete pipe. Contractors and Engineers, through the years, have learned that they can always depend upon the service given by these products.

They have confidence that the products always meet — frequently excell — the highest manufacturing standards, of the industry.

Almost as important as product quality, they know that deliveries can be depended on, because of the eight strategically located plants.

EMPIRE STEEL CORPORATION PROJECT Mansfield, Ohio
36" 8' Reinforced Concrete Culvert Pipe with Vitrified Clay Liner Plates and Tylox Flexible Rubber Coupling.

ENGINEER: Paul Prince & Associates, Dover, Ohio

CONTRACTOR: R. O. Darling, Mansfield, Ohio

PRODUCTS

Sewer Pipe (Vitrified)	Slipseal Sewer Joint	Flue Lining
Sewer Pipe (Concrete)	Segment Sewer Block	Stove Pipe
Vitrified Liner Plates	Meter Boxes	Chimney Tops
Tylox Flexible Rubber Coupled Vitrified Pipe	Ship Lap Wall Coping	Chimney Pots
Aerodrane Filter Block	Septic Tanks	Fire Brick
	Drain Tile	Fire Clay

Vitrified Clay Plate Lined Concrete Pipe
Conduit for underground steam and insulated piping

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UNIVERSAL SEWER PIPE CORPORATION
UNITED STATES CONCRETE PIPE CO.

● ***GENERAL OFFICES*** ● **1500 Union Commerce Building** ● **CLEVELAND 14, OHIO**

Sidelights for Contractors

By John C. Hayes, Counsel

Hayes and Hayes, Munsey Building, Washington 4, D. C.

Public Contracts

Subsurface Water.—The Court of Claims has awarded a contractor his excess costs by reason of unexpectedly encountering quantities of underground water on a sewer project, where the contractor was misled in preparing his bid by the government's withholding of information that would have put the contractor on notice of the probability of encountering such water and by representing that bidders had been given the best information available.

Arbitration.—Where an insurance company issued a liability policy to indemnify a subcontractor for property damage liability imposed on him by the contract and the contract contained an arbitration clause, a state court held that the insurance company was obligated to defend the subcontractor in an arbitration proceeding and to pay an award. The insurance carrier was deemed to have meant the word "trial" in its policy to include arbitration and the word "judgment" to include one confirming an arbitration award.

Insurance.—While noting that there is a conflict of authority on the question, a state court has ruled that an insurance company, in the absence of statute, is under no duty to act upon an application for insurance within a reasonable time. Recovery of damages was denied an applicant for casualty insurance who had paid the premium at the time of his written application but whose application was not accepted by the insurance company before the date on which the casualty occurred.

Subcontractor's Suit.—Under a district court ruling, a subcontractor properly instituted suit for the value of labor and materials against a Miller Act surety who completed a prime contract due to the contractor's insolvency, where the suit was begun within the statutory period of one year from final settlement, even though final payment had not been made by the government and the subcontract provided that payment to the subcontractor was not to be made until then.

Taxes

Redemption of Stock.—A circuit court has upheld a lower court's decision that a majority stockholder-officer realized capital gain rather than an ordinary dividend on the redemption by the corporation of part of his stock which he had taken in exchange for the corporation's note originally issued to him for his salary. There was evidence of a legitimate corporate purpose for the transaction, and the stock redemption was not pro rata.

In another case, where a sole stockholder sold part of her stock for cash to a prospective buyer of the corporation, and shortly thereafter the corporation used substantially all of its accumulated earnings and surplus to redeem the balance of the taxpayer's stock, a circuit court similarly concluded that the redemption was not the equivalent of a taxable dividend. While the over-all transaction admittedly was carried out in a manner to avoid taxes, the court stated that a redemption entirely divesting a taxpayer of all interest in a corporation is to be treated as a sale, with a consequent measure of gain or loss, even though the proceeds may to some extent be derived from earnings.

Inadequate Records.—A circuit court refused to upset the Internal Revenue Commissioner's determination in allowing only a reasonable portion of the advertising, entertaining, travel and other expenses claimed by a contractor whose records were not adequate to meet the burden of making satisfactory proof that he was entitled to the entire amount of the deductions.

Profit-Sharing Plan.—A published Internal Revenue Service ruling states that a profit-sharing plan will not qualify for exemption under Section 165 (a) of the Internal Revenue Code if it permits an employee to withdraw any portion of his share of the employer's contribution within two years after it has been made, unless withdrawal is made with regard to attainment of a stated age or the occurrence of some event such as illness, disability, death, or severance of employment.

Interest on Deficiency.—Interest on an income tax deficiency is not abated by a carryback of a net operating loss from a subsequent year which wiped out the deficiency, according to a district court opinion, although the taxpayer filed his refund claim before the deficiency was actually assessed.

But with respect to interest paid by a taxpayer on an excess profits tax deficiency, the Court of Claims held that the subsequent elimination of such deficiency by the allowance of excess profits tax relief under Section 722 related back to the time the affected tax returns were filed and permitted recovery by the taxpayer of the interest previously paid.

Gift Tax.—Under a ruling by Internal Revenue, a spouse who made no gift during the year is not required to file a federal gift tax return merely by reason of a consent by such spouse to the gift-splitting provisions of the Code, if the value of the gifts made by the donor-spouse during the year does not exceed $6,000 to each donee.

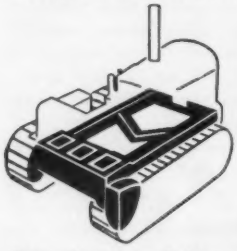
Residence Abroad.—A taxpayer employed by a U. S. government contractor overseas throughout 1949 was allowed by the Tax Court to take the foreign earned income exemption as a bona fide resident of his place of employment, although a housing shortage prevented him from moving his wife to join him there.

Tax Bill Passed.—The tax bill (H. R. 8300) was approved by House and Senate late last month and sent to the White House for the President's signature. The bill not only recodifies, rewrites and changes the Internal Revenue Code, but also brings about a net tax reduction for individuals and corporations of more than $1.3 billion. An analysis of this measure will appear in the September CONSTRUCTOR.

HERE'S TRACTOR VALUE YOU CAN MEASURE

IN yards PER DAY... IN years OF SERVICE

The Allis-Chalmers HD-9 Tractor offers performance reliability and ease of servicing that pays off in year-after-year efficiency. Here's what we mean:



BUILT TO STAND THE GAFF OF DAILY USE FOR YEARS...

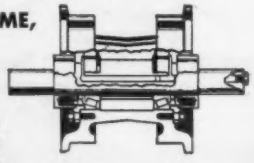
One-piece, welded main frame forms a continuous, strong backbone that means longer life for each tractor.

Oil-enclosed track release mechanism keeps adjustment at required setting and reduces track maintenance and breakage.

Smooth, efficient power train gives extra life, greater ability to absorb the punishment of tough jobs for every gear, shaft and bearing in the tractor.

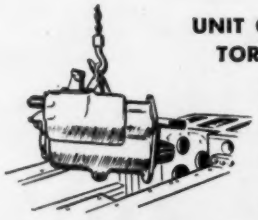
A-type truck frames permit free track oscillation and eliminate twists and strains caused by rough terrain.

EASIER LUBRICATION SAVES TIME, HELPS PROTECT EQUIPMENT



Lubrication period of 1,000 hours for final drives, truck wheels, idlers and support rollers saves both grease and time. Spring-loaded, Positive Seals keep grease in, keep dust and water out.

Fewer, more accessible lubrication points make short work of a chore. No lube points at all under tractor.



UNIT CONSTRUCTION PUTS TRACTORS BACK TO WORK SOONER

Transmission can be removed as a unit without removing clutch, final drive or bevel gear.

Engine can be removed without disassembling clutch.

Truck frame can be dismantled without removing final drive, sprocket or equalizer spring.

Clutch assembly can be removed without disturbing engine or transmission.

Final drive gear and intermediate gear can be removed without disturbing steering clutch.

Each steering clutch can be removed independently without disturbing final drive or bevel gear.

• • •

Let your distributor tell you more about the rugged construction, ease of servicing and outstanding performance ability of the Allis-Chalmers HD-9 Tractor. It's a story that adds up to value you can measure in yards per day and in years of service.

ALLIS-CHALMERS
TRACTOR DIVISION — MILWAUKEE 1, U. S. A.

Highways as a National Interest

PRESIDENT EISENHOWER's proposal for a $50 billion highway construction program over a 10-year period, in addition to normal road building, encourages the hope that the nation's urgent highway needs will soon receive attention commensurate with their size and importance. (Page 37) It is heartening evidence that the growing public demand for more and better and safer highways is finding positive leadership in the highest official quarter.

In presenting the proposal to the annual Conference of Governors on July 12, through a speech by Vice President Nixon based on Mr. Eisenhower's own notes, the President selected the logical forum for expressing his ideas on meeting highway needs. Any road construction program of such scope would have to be a cooperative undertaking between the federal government and the states. The President recognized this. He asked the governors for their cooperation in developing positive recommendations to lay before the next Congress.

Unfortunately, some of the governors did not recognize the absolute necessity of federal-state collaboration on highway problems. Several of them expressed opposition to the President's proposal the next day, contending that it would perpetuate the federal gasoline tax, which they want repealed, and would constitute federal interference with state functions. Some governors want federal-aid grants for highways discontinued, on the ground that building roads is a state function. Such viewpoints dominated the Governors' Conference the first day.

The next day, however, there was a change in attitude. Several governors who had remained silent the day before said the President's proposal had been misconstrued. They pointed out that the President was asking for the states' cooperation in a highway program, rather than interfering with state functions, and that federal assistance should be welcomed.

The governors then adopted a resolution declaring that the conference was "highly pleased by the President's willingness and determination to work with the states on this important problem," and ordering a study of the subject to be made by its executive committee.

What many of the governors failed to recognize in their initial reaction is that highways constitute a national interest as well as a state function. Highways are vitally important to the economic progress of the nation and to its defense in time of emergency. This being undeniably true, an adequate highway system is necessarily a concern of the federal government as well as the states. This has long been established in principle and in practice. The federal-aid highway program, which gives recognition to this national interest, has been in effect for nearly 40 years. With the advance of time, this national interest grows greater rather than less.

President Eisenhower is unquestionably right in his view that a $50 billion highway modernization program in the next 10 years, in addition to normal construction, is needed to serve the 200 million people this country is expected to have by 1970, and to meet the requirements of national security. Every responsible highway study in recent years has indicated the need for a highway program of that size. The great majority of the American people, we may be sure, will welcome the development of such a program.

The President has not yet outlined a program, but has merely advanced a proposal. It is to be hoped that the governors will cooperate with him wholeheartedly in developing a program of effective federal-state collaboration to meet the nation's highway needs.

A Forward Step

THE Executive Committee of The Associated General Contractors of America has endorsed the recommendations of the special A.G.C. Committee on Subcontractor Relationships designed to assist the association's members in applying the Code of Ethical Conduct more generally to bidding procedures for subcontracting. (Page 54)

The recommendations include a form suggested for use in inviting bids from subcontractors and also language for use or adaptation when form letters or post cards are employed in requesting bids.

The broad use of these forms by A.G.C. members should further demonstrate to all within the industry that the association and its members are sincerely interested in the continuous application of the principles for which the A.G.C. stands and should aid in encouraging others within the industry to follow a similar procedure. The recommendations represent a distinct forward step in the improvement of relationships in the construction industry.

Edward P. Palmer

IN THE PASSING of Edward P. Palmer at his home in Stamford, Conn., July 12, the construction industry lost a distinguished leader whose services ranged wide.

As president of the New York firm of Senior & Palmer, he was identified with many important construction projects. As 19th president of The Associated General Contractors of America, in 1938, he contributed outstanding leadership to the association and the industry. As a counselor and participant in civic, educational, labor relations and governmental affairs over many years, his services were often of national and even international import. A devout Quaker, his endeavors were characterized by a deep humanitarianism.

Mr. Palmer's influence was felt especially in labor relations activities, to which he brought broad experience and keen insight. As first chairman of the A.G.C. Labor Committee, he was a pioneer in this field, and he remained a member of the committee until his death. His gifts of leadership there, and elsewhere, will be missed.

What is there about Wausau, Wisconsin, that makes it the ideal home for one of the world's most important insurance companies?

Employers Mutuals invited the president of The Chicago Board of Trade to visit its home town and find out.

Wausau Story

". . . an amazing variety . . ."
Mr. Meyers (left) and Allen Abrams.

by **SYLVESTER J. MEYERS**, *President, Chicago Board of Trade*

"...preventing fires wasn't just talk." Mr. Meyers (left) and Mr. Roehl visit Fire Chief Petzold.

WAUSAU was lumber country once. The big timber has long since gone. And Wausau itself might be all but gone—except that its people just refused to slow down when the sawmills went idle.

Allen Abrams, Vice-President of nearby Marathon Corporation, gave me an example. The expensive softwoods used to make their food-packaging materials had to be brought in from faraway places. Hardwoods, however, were available close by. Research met the problem. It led to greater use of the hardwoods—plus the production of an amazing variety of by-products. The Wausau kind of people have an unbeatable mixture of resourcefulness and stick-to-itiveness.

Walter Roehl, long-time resident, told me that Wausau is the sixth best city in the nation, regardless of size, in fire prevention. The people did this *themselves*—decided that preventing fires wasn't going to be just talk. Neighbors helped neighbors watch for danger signs in attics and offices, in basements and backyards.

Wausau is a place where people think right and pull together to make their city and businesses the best they know how to make them. It's no wonder to me that Employers Mutuals, making its home there for 43 years, would have such a high reputation for being good people to do business with.

Employers Mutuals of Wausau are "good people to do business with."

There's such a thing as a *Wausau personality* that you don't have to go to Wausau to find. It's a way of doing business. You'll find it in all our 89 offices throughout the country. We have a reputation, born and raised in Wausau, for fairness in giving our policyholders all the protection they have a right to expect from their insurance—and an unexcelled record for prompt claim payments. We are one of the world's largest writers of workmen's compensation insurance, and handle all other lines of casualty and fire insurance as well.

Speaking of fire insurance, it is good advice to recheck your policies. Property values have changed. Replacement costs are high. Let an Employers Mutuals man help you see if your insurance covers all the items and risks you think it does—and in safe amounts. Phone our local office, or write Wausau, Wis.

Employers Mutuals *of* Wausau

Construction Legislative Checklist

• Regular Money Bills Passed; Deficit Is $3 Billion

» ANXIOUS to attack the business of campaigning and mending fences in an election year, members of Congress were rushing into the final stretch of their session this month with their target date for adjournment extended by the Senate filibuster on atomic energy.

While several important measures were yet to be acted upon in August, the legislators had managed to send to the White House the 10 regular appropriation bills for fiscal year 1955 before the June 30 deadline—a feat last performed by Congress in 1948.

It appeared that the Administration would get through the bulk of its legislative program—with some compromises—but with many of its money measures reduced below requests.

The September issue of THE CONSTRUCTOR will carry:

A roundup of actions by the 83rd Congress, second session, on all major legislative proposals affecting the construction industry.

A comprehensive analysis of the new general tax revision legislation, and how its provisions affect the general contractor and the construction industry.

Lower-than-Expected Deficit

President Eisenhower was able to announce that the government closed the 1954 fiscal year on June 30 with a deficit of $3 billion, despite government receipts of $3.4 billion less than the Administration estimated last January. Expenditures totaled about $67.6 billion, and about $64.6 billion was taken in.

The President said he had cut about $10.3 billion from former President Truman's fiscal 1954 spending budget, which leaves a net difference of $6.9 billion between the $9.9 billion deficit Mr. Truman had forecast and the actual deficit.

"We have come two-thirds of the way towards balancing of the budget," the President said in a statement, "and we have done this while putting into effect a tax program which will return nearly $7.5 billion to the people." He referred to reductions in personal income and excise taxes, and those in the general tax reduction bill.

Public debt on June 30 totaled $271.3 billion, and raising the statutory limit above the present $275 billion still was a possibility.

Congress cut the Administration's requests for $44.2 billion in the regular appropriation bills for this fiscal year by nearly $1.5 billion, to a final total of $42.7 billion. The biggest cut was in defense.

A comparison of the budget requests with amounts approved follows:

Agency	*Requested*	*Approved*
	(Millions)	
Treasury	$ 578.8	$ 577.9
Post Office	2,760.0	2,754.9
State	116.2	114.1
Justice	177.7	176.9
Commerce	931.0	837.0
U. S. Information Service	89.0	77.1
Army civil functions	465.2	457.1
Ind. Offices	5,929.7	5,651.8
Interior	422.1	405.9
Agriculture	698.7	723.7
Legislative, Judiciary	87.1	98.2
Defense	29,887.1	28,800.1
Labor and related agencies	312.8	311.8
Welfare	1,652.5	1,663.4
Dist. of Columbia	21.9	21.9

Major legislation passed in July included the general tax revision bill, the housing bill, and the atomic energy bill. The latter was still in conference for adjustment of differences.

A number of major measures faced Congress for final action this month, including the farm program, social security, foreign aid appropriation, military housing, school construction proposals, anti-subversive legislation, and a billion-dollar river and harbor projects authorization.

The status of major bills affecting construction as of August 1 is given in the checklist below:

Laws Enacted

Judicial review bill (S. 24) to permit court review of disputes arising under government contracts, and to offset effects of the Supreme Court decision in the Wunderlich case, was signed by the President May 11. Public Law 356. (May CONSTRUCTOR, page 25; June, page 36; July, page 46.)

Federal-aid highway bill (H. R. 8127) authorizing nearly $1 billion annually in federal aid highway funds for the fiscal years starting July 1, 1955 and 1956 was signed May 6. Public Law 350. (May CONSTRUCTOR, page 55; June, page 46.)

St. Lawrence Seaway bill (S. 2150) authorizing United States participation in the project was signed May 17. Public Law 358. (July CONSTRUCTOR.)

Independent Offices appropriation bill (H. R. 8583), with more than $5 billion for 30 agencies, became Public Law 428. The Atomic Energy Commission receives an appropriation of $110 million for construction plus authorization to use more than $165 million of unobligated funds. TVA receives $120 million for continuation of power plants, but amendments were voted down to permit start of new ones. National Advisory Committee for Aeronautics receives approximately $4.5 million for construction.

Interior Department appropriation bill (H. R. 8680) has been signed by the President. The new Public Law 465 contains several compromises between the figures recommended by the House and the Senate. It appropriates $126.6 million for construction by the Bureau of Reclamation; $24.3 million for construction by the Bonneville Power Administration; and $2.5 million for the Bureau of Land Management construction funds. The National Park Service receives $8.1 million for construction. $8 million has been appropriated for Alaska Road Construction and $2.9 million for railroad construction in that territory. $9.5 million was given for public works in Alaska. The Bureau of Indian Affairs receives $7.7 million for construction purposes. Limitations on force account construction expenditures were continued.

Agriculture appropriation bill (H. R. 8779) became Public Law 437. It appropriates $16 million for construction of forest roads and trails, and $59.1 million to Soil Conservation Service for conservation operations. It also authorizes $245 million in loans for rural electrification and rural telephone projects. Originally $210 million was recommended for this purpose but the Senate added $35 million.

Civil functions appropriation bill (H. R. 8367) for Department of the

M-R-S TRACTORS DO ALL HEAVY POWER JOBS FROM CUT TO COMPACTED FILL

Illustrating the high hauling capacity made possible by the M-R-S principle of operation are these two M-R-S 190 tractors powering 23 c.y. struck capacity scrapers in rough going in a rocky cut.

TAKEN FROM AN ACTUAL JOB ANALYSIS, THIS TABLE ILLUSTRATES THE IMPORTANCE OF HIGH STRUCK CAPACITY TO SCRAPER PRODUCTION AND PROFITS.

ONE-WAY HAUL — 6,390 FT.	M-R-S 190 & 25.5 C.Y. SCRAPER	ORDINARY 18 C.Y. THREE AXLE UNIT
Number of cycles timed	11	11
Average loading time, seconds	76	63
Average cycle time, minutes	9.85	9.75
Cycles per 50 minute hour	5.08	5.13
Pay yards per cycle (Estimated 90% bowl factor)	22.95	16.20
Pay yards per 50 minute hour	116.59	83.11
Estimated value of dirt per yard (Hauling only)*	20c	20c
Estimated gross income—50 min. hour	$23.32	$16.62
Estimated ownership and operating costs per hour**	$12.25	$10.45
Gross profit per 50 min. hour	$11.07	$ 6.17
Ratio of M-R-S production	140.3%	100%
Ratio of M-R-S profit	179.4%	100%
M-R-S extra profit over 10,000 hour life	$49,000	

*Estimated value of dirt is an arbitrary figure for hauling used for comparative purposes only and does not include cost of pusher, equipment on fill, overhead, etc.

**Direct ownership and operating costs figured on basis widely accepted by earthmoving industry.

THE GREATER THE HAULING CAPACITY PER UNIT THE LOWER THE OPERATING COST TO CHARGE TO EACH CUBIC YARD OF DIRT MOVED.

EACH M-R-S TRACTOR IS A HIGH SPEED POWER PACKAGE THAT OFFERS THE CONTRACTOR GREATER PROFIT POSSIBILITIES THAN EVER BEFORE

The table at the left is just one of many examples where **M-R-S** tractors equipped with exclusive **M-R-S hydraulic weight transfer** are chalking up new records of earthmoving performance. This table illustrates how the **M-R-S** formula of **GREATER CAPACITY *plus* FASTER HAULING SPEEDS *plus* SUPERIOR MANEUVERABILITY** results in greater production at lower cost per yard of dirt moved.

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M-R-S tractors are manufactured in 125, 200 and 275 horsepower sizes. There is an **M-R-S** tractor to fit your operation.

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POWER FOR LARGE SHEEPFOOT ROLLERS. The special towing-type design of M-R-S tractors combined with plenty of power makes M-R-S tractors ideal for powering heavy sheepfoot rollers.

POWER FOR HEAVY BUSH AND BOG DISCS. When fill conditions require discing M-R-S tractors cover the fill at speeds fast enough to pulverize it for quick aeration to facilitate drying.

SHORTER NON-STOP TURNS. M-R-S tractors are capable of turning up to 135 degrees in relation to the scraper. Practical non-stop 180 degree turns may be made with scrapers up to 20 c.y. struck capacity in 28 to 34 feet.

POWER FOR 50 TON COMPACTORS. M-R-S tractors are capable of powering large rubber-tired rollers at speeds up to 10 m.p.h. Required compaction is secured at lower cost even with a larger number of hauling units dumping on the fill.

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Army has been signed by the President. Public Law 453 appropriates $300.3 million for river and harbor and flood control construction, and $45.4 million for flood control on the Mississippi River and tributaries. $2.9 million is for investigations.

Housing bill recommended by the Administration (H. R. 7839) was signed by the President on August 2. (See page 28.)

Lease-purchase bill (H. R. 6342) was signed into Public Law 519. It authorizes Post Office and General Services Administration to acquire public buildings from private owners through lease-purchase agreements.

Highway construction appropriations of $500 million for federal-aid, $15 million for forest highways, and $1 million for access roads to the Inter-American highway were carried in the State-Commerce-Justice Appropriation bill (H. R. 8067) which has been signed by the President and became Public Law 471. No appropriations were made for the federal-aid airport program, although a request for funds was made by the President.

Military and naval construction bill (H. R. 9242), which authorizes $837.4 million in construction projects in the United States and overseas for the Army, Navy and Air Forces, was signed by the President on July 27 and became Public Law 534.

Air Force Academy construction has been authorized by Public Law 325. $126 million may be spent for the construction at Colorado Springs, Colo.

Conference on Education at state level, to be followed by a White House conference, was authorized by P. L. 530, signed by the President July 26.

Public Health Service Act (H. R. 8149) authorizing federal spending of $60 million a year for three years for hospital construction for the chronically ill, aged and physically disabled, was signed by the President into Public Law 482 on July 12.

Bills Passed

The following bills have been passed by both Senate and House but were not yet signed by the President:

The tax bill (H. R. 8300), making a complete and comprehensive revision of the tax laws, passed by the House in March, was amended by the Senate and sent to conference. On July 28 the House adopted the conference report and sent the legislation to the Senate. The Senate cleared it for the White House.

Soil conservation bill (H. R. 6788), which authorizes the Secretary of Agriculture to cooperate with state and local agencies in planning and carrying out projects for soil conservation, has been passed by both Senate and House and is ready for the President's signature.

Bills Passed One House

Social security legislation (H. R. 9366) to extend social security coverage, to increase taxes, to increase amount of income taxed, and to increase benefits was passed by House and reported to the Senate on July 27.

Military housing bill (H. R. 9463) authorizing the Army, Navy and Air Forces to construct family housing at foreign and domestic bases was passed by the House and reported to the Senate on July 29.

Flood control, river and harbor construction bill (H. R. 9859) was passed by the House on July 26 and reported to the Senate on July 29.

Contract renegotiation bill (H. R. 6287) to extend the Renegotiation Act through 1954 was still awaiting an opportunity for consideration by the Senate. House passed the bill in 1953. One amendment recommended by Senate Finance Committee would increase exemption to $500,000.

Anti-government competition bill (H. R. 9835) to curb government activities in the field of private industry and commerce was passed by House on July 23. See page 27.

Supplemental appropriation bill (H. R. 9936), which was passed by House July 22, providing $1.3 billion for many agencies, was reported to Senate by its Appropriations Committee July 31 with recommendation for an additional $712 million. As reported to Senate, bill would increase funds for several construction agencies and provide an amount for improving statistics on construction.

Bills Pending

Subcontractor bills to require general contractors to name proposed subcontractors and the amounts of their offers in bids on federal public works were pending. The House did not consider H. R. 1825 when the rules were suspended on July 21. The Rules Committee in March had tabled a motion to grant a rule. The companion bill (S. 848) has been stalled by objections each time it has been called on the Senate consent calendar.

School construction with federal aid is under consideration in House and Senate committees. H. R. 9841 and S. 2601 would provide $500 million for the next two years for emergency school construction. H. R. 10052 would authorize federal appropriations of up to $5 billion for school construction for the next three years.

National Organizations Push School Aid

- Press for Construction Legislation Before Adjournment

» LAST-DITCH efforts were being made early this month by 20 national organizations to push through Congress legislation providing for federal aid for school construction. The coalition was fighting against opposition from some economy-minded spokesmen in the Administration and private groups.

Representatives from the 20 groups, including the 520,000-member National Education Association, met in Washington July 31 on the campaign, and on August 2 scheduled a meeting with Federal Educational Commissioner Samuel M. Brownell to press for prompt approval of the law before the legislators adjourned.

Before Congress are emergency school construction bills which would provide $250 million for each of the next two fiscal years, to be matched by varying formulas.

One, sponsored by Sen. John Sherman Cooper (R-Ky.), head of the Education Subcommittee of the Senate Committee on Labor and Public Welfare, appeared to be one considered favorably by the organizations. Hearings have not been held on a similar House bill, sponsored by Rep. Peter Frelinghuysen (R-N.J.).

Hearings were in progress on a bill introduced July 26 by Rep. Carroll D. Kearns (R-Pa.) which would authorize federal appropriations of up to $5 billion for school construction needs during the next three years.

House Votes Curb on Government in Business

• Foreman Testifies for A.G.C. in Support of Bill's Objectives

» THE HOUSE passed on July 23 H.R. 9835, a bill providing for the termination of government operations which are in competition with private enterprise. On July 24 the bill was introduced in the Senate and referred to the Committee on Government Operations.

The new bill, along with several others, contains a policy statement to the effect that private enterprise should be encouraged at all times, and adding: "Certain activities of the federal government have developed which tend to discourage private enterprise, in that the federal government is engaging in commercial and industrial activities in direct competition with activities engaged in by private persons for profit. These commercial activities engaged in by the federal government deprive governments at all levels of tax revenues, and by competing with private enterprise, weaken the strength of our national economic system."

Provisions are made in the bill to have the government curb its commercial activities when they are in competition with private enterprise. The Secretary of Commerce is instructed to receive and examine specific public complaints and see to it that government competition is stopped.

The bill also instructs the President to examine from time to time each commercial activity engaged in by the government and terminate competitive operations, unless such termination would impair essential activities. The provisions of this bill, however, would not apply to business-type operations of the government if they are specifically authorized by Congress.

A.G.C. Supports Measure

Invited to testify on this subject, The Associated General Contractors of America responded on July 16 with a letter from Managing Director H. E. Foreman to Representative Clare E. Hoffman, chairman of the House Committee on Government Operations.

Mr. Foreman's letter outlined to the committee the policies adopted by the association with respect to government competition with the construction industry, and expressed support of the objectives of the proposed legislation.

"One of the major activities of the association since it was established in 1918 has been to demonstrate to agencies of federal, state and local governments that public works construction can be executed more promptly, more efficiently and more economically through the normal channels of the construction industry than it can by government force account or day labor construction," Mr. Foreman wrote.

He cited a resolution adopted at the 35th annual A.G.C. convention in March which points out that "now, more than ever before, the construction industry has the capacity to execute all necessary public and private construction promptly and economically."

Contract Work Increasing

In recent years most federal agencies have recognized increasingly the advantages of construction by contract and have curtailed the amount of their force account operations in which they are in competition with the construction industry, Mr. Foreman said. This has been due in part to actions by Congress placing limitations on the amount of some appropriations which can be used for force account operations, in recognition of the advantages of contract construction.

The federal agency which now executes the greatest volume of construction by force account is the Tennessee Valley Authority, Mr. Foreman said. Practically all TVA consctruction has been and is being done by workmen hired by the agency. Only a small amount has been done under contracts awarded to the lowest responsible bidder.

"Experiences with other agencies of the federal government have demonstrated conclusively that construction contractors can execute this type of work more economically than the government agency, and at the same time the contractors pay their regular federal, state and local taxes," Mr. Foreman wrote.

The A.G.C. spokesman recommended that the declaration of policy in the proposed legislation include a reference to the construction of public works, because of the size of federal, state and local public works construction programs. He also stressed advanced planning of public works.

President Asks Funds for Better Statistics

» PRESIDENT Eisenhower last month asked Congress for a supplemental appropriation of $1,110,000 to enable the Departments of Commerce and Labor to improve their fact-gathering methods on construction.

Prospects for a substantial appropriation did not look good early in August, however, as the House rejected the proposed funds outright.

The Senate Appropriations Committee, however, in reporting the supplemental bill to the Senate, included recommendations of $600,000 for Commerce Department construction statistics and $110,000 for this activity by the Bureau of Labor Statistics.

The committee stated, in part:

"Accurate and timely construction statistics are considered of vital importance and assistance to many of our government agencies as well as private industry. It is understood that present available construction statistics are, to a large degree, inaccurate, incomplete, and deteriorating rapidly."

Under the provisions of the original proposal, the Department of Commerce would receive $1 million for salaries and expenses, and the Department of Labor the other $110,000.

Accompanying the President's request was a letter from Percival Brundage, acting director of the Budget Bureau, which stated that "Present data pertaining to the construction industry are inadequate for the needs of both the Government and the industry itself. The proposed supplemental appropriations will permit these Departments to expand and augment the collection and analysis of information concerning construction activity. This program is a coordinated statistical project conducted jointly by the Departments of Commerce and Labor."

The Chamber of Commerce of the United States urged Congress to approve the appropriation request. In a letter to House Appropriations Committee Chairman John Taber (R-N.Y.) the chamber said that the proposed overhaul of government construction statistics is "well-designed, greatly-needed and economical."

"The construction industry is one of the largest and most important segments of American life," the let-

Omnibus Housing Law Signed by President

• Public Housing Low-Rent Units Limited to 35,000

» PRESIDENT Eisenhower on August 2 signed into law the compromise omnibus housing bill which he described as "a major advance toward meeting America's housing needs," though he was not satisfied with some of the bill's provisions.

The Chief Executive said that he thought the nation needed more generous public housing provisions and that he should have broader authority to adjust the terms of home loans to meet changing economic conditions.

"Nevertheless, by this new law we have made a major advance toward meeting America's housing needs," he said.

"In coming years it will also strongly stimulate the nation's construction industry and our country's entire economy," he added.

Late last month Congress passed the compromise bill which set up safeguards against abuses in federal housing programs and curtailed sharply the President's public housing requests.

On July 28 the Senate approved the conference report on the Housing Act of 1954 one week after the House agreed to it. The bill requires builders of large rental projects who use government-insured loans to certify actual construction costs to the government after a project is completed. This measure is designed to prevent builders from reaping "windfall profits" as has been charged recently by Senate committees.

The public housing provision authorized construction starts on up to 35,000 new low-rent units during the current fiscal year, but limited such housing to persons displaced by slum-clearance projects or other government-sponsored programs. President Eisenhower had asked for 35,000 units of public housing a year for the next four years.

Initial action on the bill taken by the House in early April killed all public housing provisions, but the Senate version approved the President's full request for the 140,000 units.

Chief debate in the Senate centered around public housing provision and whether the previous Democratic or the present Republican Administration was to blame for the alleged abuses and irregularities in the Federal Housing Administration loan insurance program. Proponents of public housing charged that the compromise measure, which limits construction of low-cost units to slum clearance, would not have a chance to function before its authorization expires next June 30. Others said that many states do not have slum clearance projects underway and could not qualify for government loans.

The compromise bill carried these additional major provisions:

Home repair. FHA supervision and approval is required on all property and repair loans insured by FHA. Repair loans eligible for FHA insurance are restricted to those who would "substantially improve" or protect utility of the property.

Also: bar FHA-insured repair loans on new houses until they have been completed and occupied for six months; prohibit multiple FHA-backed loans for a single piece of property that would total more than maximum size of a single loan; require that lenders carry 10% of the loss on individual FHA-insured repair loans; and keep present ceilings on repair loans insurable by the FHA along with present maximum maturity periods for such loans.

Sales housing. Maximum maturity period of 30 years or three-quarters of FHA-estimated remaining life, whichever is lower, is provided for new and existing one-to-four family sale housing bought with FHA-insured mortgages. FHA is also permitted to insure up to 95% of the $9,000 of the value of new housing and 75% of the value above $9,000. President was also authorized to raise the $9,000 limit to $10,000.

Provisions were also made for a loan of up to 90% of the first $9,000 of the value of existing housing, and 75% of the balance over $9,000. Again the President was authorized to raise the $9,000 limit to $10,000. Also, maximum mortgage amounts were limited as follows: $20,000 for one-to-two-family housing, $27,000 for three-family dwellings, and $35,000 for four-family units.

Low-cost suburban housing. Maximum amount of owner-occupant insurable mortgage raised from $5,700 to $6,650, and increase maximum of builder-insurable mortgage from $5,100 to $5,950. Also, a minimum of 5% down payment is required for such housing.

Mortgages. Federal National Mortgage Association was rechartered with the liquidation of mortgages held by FNMA, and the gradual replacement by private investors' funds of the government's investment in FNMA. Also, the establishment of a National Voluntary Mortgage Credit Extension Committee was authorized.

Builders' warranty. Builders and sellers of new-sale housing built with FHA or Veterans Administration-insured mortgages are required to give purchasers a warranty declaring that the dwelling has been built in "substantial conformity" with approved plans and specifications.

Housing rehabilitation. A new mortgage insurance program was authorized to aid rehabilitation of existing dwellings and the construction of new homes in urban renewal areas. Also, a new mortgage insurance program was authorized to provide homes for persons displaced by governmental slum clearance projects.

Public agency loans. The Housing and Home Finance Agency was authorized a $50 million revolving fund from which to make loans to public agencies for public projects. The fund expires on June 30, 1956.

The omnibus housing bill also provided for: FHA-insured advances under "open-end" mortgages as long as the money is used for necessary improvements and repairs; authorization of $5 million for preliminary planning of public works programs; and the use of FHA-insured rental properties for transient or hotel purposes only if agreed to by the FHA commissioner before May 28, 1954 or if the project is in a resort area and the accommodations had been used for transient or hotel purposes prior to May 28, 1954.

(Continued from page 27)

ter said. "The federal government, through the Bureau of Public Roads, the Housing and Home Finance Agency and other governmental divisions is directly concerned with the construction industry. The financing of construction has a major impact upon the country's banking activities and mortgage loans represent a key outlet for the savings of our citizens.

"For all these reasons, accurate, complete and up-to-date information on the construction industry is needed in the public interest."

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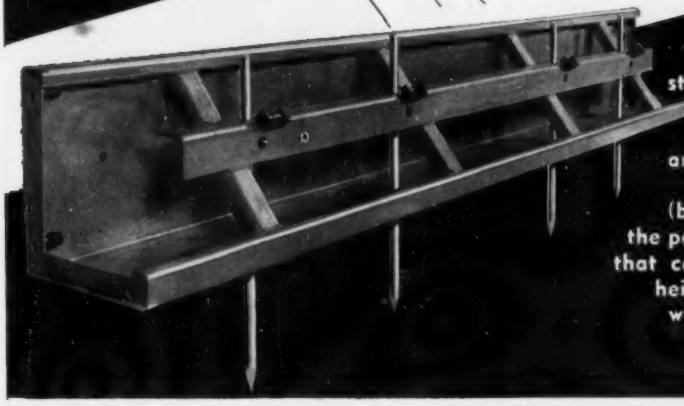

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Lock-Out Approved by NLRB After Strike 'Threat' by Union

• Employers Need Not Be Subject to 'Whipsawing'

» NATIONAL Labor Relations Board Chairman Farmer and members Peterson, Rodgers and Beeson joined in an important decision late last month holding that all the members of an employers association had legally locked out their employees after the union had struck one of the association members.

The board, with NLRB member Murdock dissenting, held that under recent U. S. Circuit Court decisions employer members of the association could legally lock out their employees when faced with the "threat" of strike and "whip-sawing" tactics by a union. This decision is also in line with a previous NLRB ruling involving two A.G.C. chapters in California as reported in the July, 1953 CONSTRUCTOR, page 25.

Text of Decision

Text of the 4-to-1 decision, which accompanied an order to dismiss the complaint, follows in full:

"On November 10, 1953, Trial Examiner George A. Downing issued his intermediate report in the . . . proceeding, finding that the Respondents (employers) had engaged in certain unfair labor practices, and recommended that they cease and desist therefrom and take certain affirmative action, as set forth in the copy of the intermediate report . . . . Thereafter, the Respondents filed exceptions to the intermediate report together with supporting brief. The Respondents also requested oral argument. The request is hereby denied, because the record, the exceptions, and the briefs, adequately present the issues and positions of the parties.

"The board has reviewed the rulings made by the trial examiner at the hearing and finds that no prejudicial error was committed. The rulings are hereby affirmed. The board has considered the intermediate report, the Respondents' exceptions and brief, and the entire record in this case, and hereby adopts the findings and conclusions of the trial examiner only to the extent that they are consistent with this decision and order.

"The Respondent-employers, together with Frontier Linen Supply, Inc., are members of the Respondent-association, Linen and Credit Exchange (hereafter called the Association). Pursuant to collective bargaining on a multi-employer basis for approximately 13 years, the Respondents and the Union have been parties to successive collective bargaining agreement[1] covering the truck driver employees of the respective employers. Prior to the expiration of the contract, containing an automatic renewal clause, which was to expire on April 30, 1953, the Union notified the Respondents of its desire to open negotiations to change the agreement. Thereafter, the parties negotiated unsuccessfully for a new contract, and, on May 26, 1953, the truck drivers employed by one members of the Association, Frontier, went on strike and picketed Frontier's plant. On May 27, the remaining Association members laid off their truck drivers after advising the Union that the layoff action was the result of the strike of Frontier's plant and that the employees would be recalled if the Union withdrew its picket line and ended the strike at Frontier. In the meanwhile, the parties continued their bargaining negotiations, and, on June 3, the Union and the Association executed a new contract, respectively terminated the strike and the lockout, and the truck drivers of the various employers returned to work.

"As pointed out by the trial examiner, the foregoing facts, mainly stipulated, present the case 'largely in a vacuum.' From these facts, and in the *absence* of specific evidence showing that the strike was likely to spread to the nonstruck employers, the trial examiner, by reliance upon certain prior board decisions, inferred that the employers who were not struck engaged in unlawful retaliatory conduct. However, in these circumstances, we think the more reasonable inference is that, although not specifically announced by the Union, the strike against the one employer necessarily carried with it an implicit threat of future strike action against any or all of the other members of the Association. For, the Union's action represents a similar technique of exerting economic pressure to atomize the employer solidarity which is the fundamental aim of the multi-employer bargaining relationship. The calculated purpose of maintaining a strike against one employer and threatening to strike others in the employer group at future times is to cause successive and individual employer capitulations. Therefore, and in the absence of any independent evidence of anti-union motivation, we find that the Respondent's action in shutting their plants until termination of the strike at Frontier was defensive and privileged in nature, rather than retaliatory and unlawful.[2]

"Contrary to the assertion of our dissenting colleague, our decision herein does not establish that the employer lockout is the corollary of the employees' statutory right to strike. Upon the facts of this case, we find it unnecessary to pass upon that issue. We have done no more in this case than affirm the legal concept enunciated by the Ninth Circut Court of Appeals in the *Davis Furniture* case, which provides that a strike by employees against one employer-member of a multi-employer bargaining unit constitutes a threat of strike action against the other employers, which threat, *per se,* constitutes the type of economic or operative problem at the plants of the nonstruck employers which legally justifies their resort to a temporary lockout of employees.[3]

"Accordingly, we find that the general cousel has failed to show that the Respondents' temporary cessation of operations constituted an unfair labor practice and we shall, therefore, dismiss the complaint in its entirety."

---

[1] Negotiations on these contracts were conducted between representatives of the Association, acting on behalf of all its employer-members, and representatives of the Union. After agreement by the respective representatives on a proposed bargaining contract, the proposal was submitted for approval to the members of the Association and the Union. Upon approval of the proposed agreement by the individual members of the Association and the Union, the agreement was signed by each employer-member of the Association and by officials of the Union.

[2] See: *Leonard, et al d/b/a/Davis Furniture Company, et al v. N.L.R.B.,* 205 F. 2d 355 (C. A. 9), wherein the court stated, ". . . the right of the employers to lock out temporarily all the employees is no more than equal to the right of the union of all the employees to call out the employees of one after another of the [employers] in the whipsawing manner above described."

[3] *Ibid,* wherein the court also stated, ". . . the whipsawing threatened the loss of customers and a cessation of the [employers'] market."

NLRB Jurisdictional Rules

Last month the NLRB as constituted with a majority of Eisenhower appointees issued its first major policy statement with announcement of new jurisdictional standards by which it will not accept cases which are predominantly local or intrastate in character. The rules are fairly complicated in their wording, but they add up to a further tightening of the old NLRB's standards for asserting jurisdiction. In some cases the required amount of dollar volume involved has actually been doubled over the old board's standards.

A number of labor organizations have criticized the new policy as being discriminatory. Many employers question whether they will be permitted to seek relief from illegal union activities in state courts or with state agencies in view of the United States Supreme Court's decisions in the Garner and related cases. It can be expected many important court decisions will be issued on this subject.

Whether the policy will further broaden the "gray zone" or no man's land created by the Garner decision (July CONSTRUCTOR, page 65) is not yet known. One result of that case was to prevent state courts from handling labor disputes which also were covered by the Taft-Hartley Act. The Administration last March asked Congress to amend the Taft-Hartley Act to permit jurisdiction by state courts or agencies where the federal agency (NLRB) refused to assert jurisdiction which it has in fact.

A.G.C. chapters have been furnished the full text of the new NLRB jurisdictional yardsticks.)

Wage-Hour White Collar Rules

After a four-year study, the Wage-Hour Administrator last month issued a formal regulation setting forth the conditions under which deductions may be made from salaries of executive, administrative and professional employees without disturbing their exempt status under the Federal Wage and Hour Law.

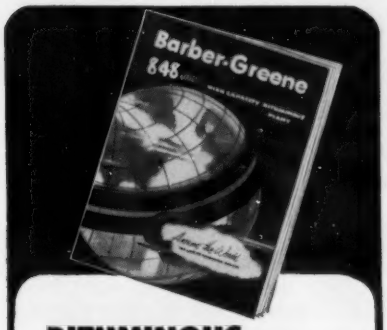
These employees are exempt from the minimum wage and overtime provision of the law, subject to regulations of the Administrator defining the exemption.

In 1950 the Administrator issued revised regulations covering such white collar exemptions, including one requirement that the employee be compensated on a salary basis. "Salary basis" was interpreted to mean that if the employee worked any time during a given week, he had to be paid a full week's salary with no deductions, even if he were absent for personal reasons.

The Administrator has now relaxed this rule to permit deductions in four or five situations, including those where the employee absents himself for a day or more for personal reasons, with certain exceptions. Deductions also can be imposed for violations of major safety rules.

(A.G.C. chapters have been furnished the text of the new regulations with a statement from the Administrator regarding enforcement.)

Note: In the June issue, page 26, the heading, "Government Cannot



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Force Contractor to Pay Overtime for Excess of 40 Hours per Week," does not tell the full story, and, considered alone, is incorrect. The full sense of the story is in the first paragraph of the article: "The Comptroller General has ruled that the Defense Department does not have the authority to place in a construction contract the requirement that the contractor pay overtime for work in excess of 40 hours per week when laborers and mechanics do not work more than 8 hours in any day." Of course, contractors must comply with the federal wage and hour law where applicable. The story relates to contracts.

This note is carried to prevent any possible misinterpretation being placed on the article by reading the heading alone which necessarily must be brief. The text itself is accurate.

Kroger supermarket in Glendale, Missouri. Architect: Cay Weinel, St. Louis, Missouri. Contractor: White Development Corporation, St. Louis, Missouri.

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Welfare Fund Investigation

The Senate Labor Committee's subcommittee inquiring into employee pension and welfare fund handling has been voted an increase in its operating funds from $75,000 to $125,180.

Subcommittee Chairman Ives stated his position in seeking the increase in appropriations as follows:

"The preliminary investigation of employee welfare and pension plans by the Subcommittee has established the far-reaching import of this investigation and the need for a substantial increase in the funds available for the investigation. Considerably more than 17 billion dollars are currently lodged in pension funds alone, with reserves increasing at the rate of 2¼ billion dollars a year. Employers and employees are contributing more than 5 billion dollars annually to provide pension and welfare benefits. At least 12 million employees are currently covered by pension plans and 30 million employees receive some form of health and welfare protection.

"Despite the vast amount of money involved in pension and welfare plans, there is virtually no control or regulation over the operation of such plans. As far as is known at this time, state trust and banking laws provide little, if any, effective control over their operation and the two basic Federal regulatory statutes, the Labor-Management Relations Act, 1947, and the Internal Revenue Code, do not provide adequate standards for proper control. Lack of adequate standards at both the Federal and state levels has led to some abuses. The purposes of the investigation are to obtain comprehensive information on cost, coverage and operation of welfare and pensions plans to determine the scope and effectiveness of existing public and private regulations, to ascertain the nature and extent of improper practices, to develop from this information minimum standards for efficient administration of pension and welfare plans, and finally to formulate and propose such legislation as may be required to meet the situation."

Meanwhile, Chairman Samuel K. McConnell, Jr. of the House Labor Committee announced that a special nine-member subcommittee will be ready to start public hearings on employee welfare and pension funds as soon as the staff has completed a preliminary checking into the subject.

Big Rigs
Pay Off In Profits!

An Actual Job Report from IH

Glenn Olson Bruce Olson

THE G.A. OLSON CONSTRUCTION COMPANY UP IN MARSHALL, MINNESOTA, IS A LONG WAY FROM BEING A BIG OUTFIT...BUT IT DOES THINGS "IN A BIG WAY." GLENN AND BRUCE OLSON--BOTH IN THEIR EARLY 30'S--RUN THE SHOW...

IT'S A TIGHT SCHEDULE, BRUCE, BUT WE'VE GOT THE MEN AND EQUIPMENT TO DO THE JOB.

WE KNOW FROM PAST EXPERIENCE WHAT THOSE BIG INTERNATIONALS CAN DO. WE'LL LICK IT, GLENN!

THE OLSON BOYS STARTED EARLY...BACK IN '42, THEIR DAD, A VETERAN MINNESOTA CONTRACTOR, HAD TAKEN ON A TOUGH ASSIGNMENT WHEN HE PITTED THE G.A. OLSON CONSTRUCTION COMPANY AGAINST THE CANADIAN WILDERNESS. HIS WAS ONE OF SEVERAL AMERICAN OUTFITS PUSHING THE VITAL ALCAN DEFENSE ROAD THROUGH AHEAD OF THE SURVEYORS...

WE'D BETTER FELL A COUPLE OF LOGS ACROSS THIS BOG... THEN BRING UP THE EQUIPMENT IN THE MORNING.

RIGHT, DAD. THEN WE'LL BE SET TO TACKLE THE NEXT 10-MILE STRETCH AT DAWN.

I'LL GO BACK AND GET THE CREW TO 'LEAP-FROG' THE EQUIPMENT THROUGH THE OUTFITS WORKING BELOW.

THE CONSTRUCTION CAREERS OF THE TWO BOYS WERE INTERRUPTED BY THEIR SERVICE IN WORLD WAR II. BUT, WHEN PEACE CAME...

NOW WE CAN TEST THOSE 'BIG EQUIPMENT' IDEAS OF YOURS, GLENN.

I'VE BEEN DOING A LOT OF FIGURING, BRUCE... AND I'M CONVINCED THAT BIG RIGS WILL PAY OFF IN PROFITS. LET'S TALK TO DAD.

AND SOON...

IT'S THE BOYS' IDEA, TOM-- BIGGER, FASTER EQUIPMENT.

YOU'LL BE GLAD YOU CHOSE INTERNATIONALS. THEY STAND UP.

INDUSTRIAL POWER

THIS '24' HAS THE WORK CAPACITY THAT'LL MAKE OUR PLAN WORK, BRUCE!

THE OLSONS' FIRST I-H CRAWLER WAS FOLLOWED BY ANOTHER... AND ANOTHER. WHEN THEIR FATHER DIED IN 1948, IT SEEMED NATURAL FOR THE TWO YOUNG MEN TO CARRY ON THE FINE RECORD AND REPUTATION HE HAD BUILT SINCE HE STARTED THE COMPANY IN 1923.

HERE COME THE INTERNATIONALS

EVEN THOUGH WE ARE A MEDIUM-SIZE OUTFIT, THE BIGGEST, FASTEST EQUIPMENT WE CAN GET WILL CUT OUR UNIT DIRT-MOVING COSTS.

IT'S THE ONLY WAY WE CAN MEET COMPETITION, GLENN. WE'VE GOT TO HAVE A RUBBER-TIRED MACHINE TO HANDLE OUR LONG HAULS ...ONE THAT WILL KEEP MOVING DIRT WITHOUT DOWNTIME.

THEY HAD TO MAKE THE RIGHT CHOICE... SO THEY WENT RIGHT TO THE FACTORY BEFORE BUYING--

I LIKE THIS CLEAN DESIGN AND UNIT CONSTRUCTION, GLENN. IT'S SURE TO BE RUGGED.

IT SHOULD GIVE US VERY LITTLE DOWNTIME... AND BE EASY ON THE MAINTENANCE CREW. THAT LOOKS LIKE THE CHOICE.

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ON JOB AFTER JOB, THEIR DECISION PAID OFF. THE BIG, FAST RUBBER-TIRED RIGS WITH AN ALL-INTERNATIONAL TEAM OF CRAWLERS AND SCRAPERS--PERMITTED LOW BIDDING AND REALLY PROFITABLE PERFORMANCE... WERE USED ON MORE THAN 90% OF THE G. A. OLSON COMPANY JOBS...

AND THEN, IN 1952, CAME ONE OF THE TOUGHEST TESTS... 12 MILES OF REBUILDING ON HIGHWAY 59 IN MINNESOTA. THEY BID $173,000 FOR 386,000 CUBIC YARDS IN WET, SWAMPY LAND... AND THE BID WAS LOW. THEY HAD ONLY A 90-DAY TIME LIMIT!

RADIO FORECASTS MORE RAIN... AND PLENTY OF IT, GLENN.
WE'RE RACING THE CALENDAR NOW! OUR INTERNATIONALS HAVEN'T LET US DOWN YET, BRUCE. WE'VE GOT TO KEEP THEM MOVING...

AS RAIN FELL FASTER THAN THE EARTH COULD SWALLOW IT... 14 INCHES IN 10 DAYS... WATER LAY INCHES DEEP ON THE HIGHWAY RIGHT-OF-WAY. ALTHOUGH THE OLSON OUTFIT WAS PINNED DOWN FOR DAYS AT A STRETCH, THEIR EXPERT OPERATORS AND TEAM OF BIG INTERNATIONALS KEPT LOADS OF SOGGY, WATER-LOGGED MATERIAL MOVING ON DAYS WHERE IT LOOKED IMPOSSIBLE...

AS THE TIME LIMIT DRAWS NEARER AND NEARER, MEN AND MACHINES PUSH HARDER AND HARDER IN THEIR BATTLE AGAINST THE ELEMENTS. AND THEN--

THE WEATHER CLEARED.. AND WORK SPEEDED UP. FAST LOADING, CARRYING AND DUMPING BROUGHT THE G.A. OLSON COMPANY THROUGH AHEAD OF SCHEDULE!
WELL, YOU CAN SAY WE HAD PRACTICALLY NO MACHINE DOWNTIME. THOSE I-H UNITS CAN REALLY TAKE A BEATING!
FACT IS -- SINCE WE'VE GOTTEN ALL I-H EQUIPMENT, WE'VE CUT OUR DOWNTIME IN HALF.
YES, WE'RE MOVING MORE DIRT NOW WITH LESS EQUIPMENT... AND AT A LOWER COST PER YARD -- THANKS TO INTERNATIONAL!
WELL, THANKS, MR. OLSON. IT'S A GREAT STORY... AND WE'LL TELL IT JUST AS IT HAPPENED.
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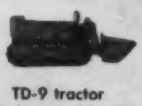
TD-18A crawler with matched scrapers

TD-24 crawler with bullgrader

TD-9 crawler with hydraulic bulldozer

TD-6 crawler with hydraulic bulldozer

TD-14A crawler with cable bullgrader



TD-9 tractor with front-end loader

TD-18A crawler with sideboom

Model 2T-75 two-wheel, rubber-tired tractor with 18-yard heaped capacity scraper

Model 2T-75 two-wheel, rubber-tired tractor with 20-yard heaped capacity bottom dump wagon

Model 2T-55 two-wheel, rubber-tired tractor with 13-yard heaped capacity scraper

CR-611-D. 6-20. LITHOGRAPHED IN UNITED STATES OF AMERICA

President Proposes $50 Billion For Highways over 10-Year Period

- Seeks Cooperation of Governors in Developing Plan
- Wants to Submit Positive Program to Next Congress

» THE BIGGEST NEWS in the highway field last month was President Eisenhower's proposal to the Conference of Governors for a $50 billion program of highway construction, over a 10-year period, in addition to normal road building. Such a program of modernization is needed, he said, to serve a population of 200 million, which is expected to be reached by 1970. It is also needed for national defense in the event of an atomic war, he emphasized.

The President's proposal was outlined to the 46th annual meeting of the Conference of Governors July 12 at Bolton Landing, N. Y., in a speech by Vice President Nixon based on Mr. Eisenhower's own notes.

It was not a program that the President presented, nor even a plan. It was a proposal, or, as he described it later at a news conference, a proposition he made to the governors. The proposed program remains to be developed. Its development may be initiated later this year after a study of highway needs by the executive committee of the Conference of Governors, in cooperation with the American Association of State Highway Officials, and a special meeting of the governors to consider the proposal.

A Four-Point Proposal

The President listed four requirements for a modernized system:

- A grand plan for a properly articulated system that solves the problems of speedy, safe transcontinental travel; intercity communication; access highways and farm-to-market movement; metropolitan area congestion—bottlenecks and parking.
- A financing proposal based on self-liquidation of each project, wherever that is possible, through tolls or the assured increase in gas tax revenue, and on federal help where the national interest demands it.
- A cooperative alliance between the federal government and the states so that local government—the most efficient sort of government in the administration of funds—will be the manager of its own area.
- Very probably, a program initiated by the federal government, with state cooperation, for the planning and construction of a modern interstate highway system, with the federal government functions, for example, being to advance funds or guarantee the obligations of localities or states which undertake to construct new or modernize existing highways.

The President cited the opinion of experts that $5 billion a year for 10 years, in addition to all current, normal expenditures, "will pay off in economic growth." When we have spent $50 billion in the next 10 years, he added, "we shall only have made a good start on the highways the country will need for a population of 200 million people."

Next Congress May Act

After outlining the four-point proposal, Vice President Nixon read to the Governors' Conference this direct quotation from the President's notes indicating that the Administration wants to submit the highway program to the new Congress which convenes in January:

"I hope that you will study the matter, and recommend to me the cooperative action you think the federal government and the 48 states should take to meet these requirements, so that I can submit positive proposals to the next session of the Congress."

The President's proposal may therefore become an issue in the congressional elections this fall, and possibly in some gubernatorial campaigns.

Highways 'Inadequate, Obsolete'

Calling for "top priority" for transportation needs, Mr. Eisenhower described our highways as "inadequate locally, and obsolete as a national system." The President's notes, as presented by Mr. Nixon to the governors, continued:

"Now, let us look at the highway net of the United States as it is. What is wrong with it? It is obsolete because in large part it just happened. It was governed in the beginning by terrain, existing Indian trails, cattle trails, arbitrary section lines. It was designed largely for local movement at low speeds of one or two horsepower. It has been adjusted, it is true, at intervals to meet metropolitan traffic gluts, transcontinental movement, and increased horsepower. But it has never been completely overhauled or planned to satisfy the needs 10 years ahead."

The President listed "the penalties of this obsolete net" as follows:

- An annual death toll "comparable to the casualties of a bloody war." It approaches 40,000 killed and exceeds 1,300,000 injured each year.
- The annual wastage of billions of hours in detours, traffic jams, etc., "measurable by any traffic engineer and amounting to billions of dollars in productive time."
- Civil suits that clog up the courts, more than half of which are estimated to have their origins on highways, roads and streets.
- Nullification of efficiency in the production of goods by inefficiency in the transport of goods.
- Appalling inadequacies to meet the demands of catastrophe or defense, should an atomic war come.

"These penalties warrant the expenditure of billions to correct them," President Eisenhower said.

The Governors' Reactions

The President's proposal brought prompt reactions from many of the governors attending the conference—at first predominantly unfavorable. In the Governors' Conference there has long been strong advocacy of repeal of the federal gasoline tax of 2 cents a gallon so that the states might increase their own gasoline taxes by that much and have more money for highways. Some of the states have complained that more money is taken from them by the federal gasoline tax than is returned in federal-aid highway grants. Along with advocacy of repealing the federal tax and leaving the field of gasoline taxation entirely to the states, some governors have urged that federal-aid grants to the states for highways be discontinued.

These positions were reflected in the initial reactions by many of the governors to the President's proposal. Gov. John S. Fine of Pennsylvania, a Republican, took the lead in voicing opposition to the proposed $50 billion program. He criticized it on the ground that it would end hopes of repealing the federal gasoline tax.

"We want the federal government

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WET JOBS

#29 of a Series

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• The problem was to lower 28 ft of groundwater in a 30-ft cut for a new concrete intercepting sewer—to do this on a site where contractors could recall previous experience of tough water-fighting at an excavation depth of only 16 ft, even with aid of wellpoints. Thus, the outlook was not exactly rose-colored.

• Yet the plan of the Griffin engineers and the efficiency of their pumps and wellpoints gave a sure, speedy solution. The truly enormous volume of 20 *million* gals per day was pumped under perfect control, keeping subgrade bone-dry and permitting economical open cut, except where sheeting was required (see photo) to protect existing sewers and structures.

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to get out of the gasoline and fuel oil tax field for once and for all and now is the time to do it before we embark on any large-scale highway program such as the President has suggested," Governor Fine said.

The Pennsylvanian also criticized President Eisenhower's references to the highway system as obsolete, saying: "I feel there was a cloud placed upon our 48 states because of the assertion that our systems are obsolete." He remarked that Pennsylvania has 41,000 miles of improved highways and has spent $537 million on highways during his four years in office.

"We want to continue unimpeded by any federal system," he added. "We have our program for the next 12 years."

Governor Fine then introduced a resolution in the conference proposing a meeting between the governors and the President to discuss the highway proposal, to take place in late November or December. The resolution contained a demand that the federal gasoline tax be repealed.

A Change in Attitude

The following day, however, the attitude of the Governors' Conference underwent a pronounced change. Gov. Frank J. Lausche of Ohio, a Democrat, took the lead in expressing a different view. He said he thought the President's proposal had been misconstrued. He construed it to mean a willingness to use federal credit to assist in the financing of toll roads, if necessary, rather than interference with state functions. Governor Lausche, whose state is planning extensive construction of toll roads, said he would welcome such help. He pointed out that it might be extremely important if the volume of toll road financing became so great that interest rates were increased.

The Ohio governor was joined in this view by Gov. Charley E. Johns, of Florida, a Democrat, and Gov. Theodore R. McKeldin of Maryland, a Republican. Governor McKeldin chided some of his fellow governors for opposing what he said was essentially the same program as one suggested by a special committee of the Governors' Conference only a month before.

"On June 11, our Council of State Governments made a statement on highway needs," the Maryland governor said. "One month and two days later President Eisenhower adopted our council's report in a speech to us. Is that a cause for the jumping jitters that swept around these tables yesterday?

"Let us not plunge into panic just because the President notes his approval of the very program we have been advocating. Rebuilding the highway systems of the states and the joint system of highways among the states is a job that must be done."

The governors then adopted a resolution declaring that the conference was "highly pleased by the President's willingness and determination to work with the states on this important problem." It represented a modification of the one previously proposed by Governor Fine. The demand for repeal of the federal gasoline tax was eliminated. The resolution directed the executive committee of the conference, in cooperation with the A.A.S.H.O., to study the status of road programs, and suggested that the governors meet later in the year to discuss the subject with appropriate federal officials.

The President's Comments

At his news conference on July 14, President Eisenhower was questioned about his ideas of financing a $50 billion highway program. Obviously having in mind the criticism expressed initially by some of the governors, he said that all he had made was a proposition to them; that he believed we were at least $50 billion behind in our road networks, and that we were suffering from it in losses of life, inefficient operation of transport and in parking troubles.

In the great part of his proposed program, the President continued, he very much favored self-liquidating projects. The federal government must have the governors and legislatures with it, he said, and until they came to him and showed him something they could get together on, it was really idle to say how any single project could be financed. In some cases the federal government would have to do it all, but by and large it should be local, he added. The President emphasized that all this had nothing to do with the normal road building that is going on now in which the gasoline taxes are involved.

The need for a greatly expanded highway program is not a new thought with President Eisenhower. In his Economic Report to the Congress last January, he said we would have to spend $8 billion annually for 10 years to catch up on highway needs.

President Names Group to Study Transportation

President Eisenhower last month established a Cabinet Committee on Transport Policy and Organization to review the government's policies and programs affecting all forms of transportation and to present recommendations for the President's consideration. Since many studies have been made from which much of the required data can be readily obtained, Mr. Eisenhower said, a large fact-finding task will not be necessary. The committee was requested to submit its recommendations not later than Dec. 1.

Committee Members

Secretary of Commerce Sinclair Weeks was designated as chairman of the committee and Secretary of Defense Charles E. Wilson and Defense Mobilization Director Arthur S. Flemming as members. Secretary of the Treasury George M. Humphrey, Postmaster General Arthur E. Summerfield, Secretary of Agriculture Ezra Taft Benson and Budget Director Rowland R. Hughes were named as ad hoc participating members.

Purposes Outlined

The President outlined the purposes of the committee in a letter to Secretary Weeks. He wrote in part:

"The vital interests of this nation require that the transportation industry of the United States maintain itself at maximum effectiveness. The government must provide effective leadership in assuring that its policies and programs affecting the various forms of transportation, whose services are so necessary to the public and to industry and which have such a vital bearing upon the national security, are best designed to aid them in performing fully the roles for which each is best suited.

"Over the past years, studies have been made and recommendations have been presented regarding government programs affecting particular segments of the transportation industry. . . . However, a comprehensive up-to-date review of over-all transportation policies and problems is needed as an aid in assuring the over-all consistency of government policies and programs concerning particular branches of the transportation industry. Also, the organization of the federal government to cope with transportation problems should be reviewed."

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PROPERTY AND CASUALTY INSURANCE—SURETY BONDS

Apportionment of Federal-Aid Highway Funds

For the Fiscal Year 1956

State	Primary	Secondary	Urban	Interstate	Total
Alabama	$6,738,800	$5,221,937	$2,266,452	$3,536,466	$17,763,655
Arizona	4,723,075	3,216,555	672,891	1,967,160	10,579,681
Arkansas	5,257,058	4,207,659	967,757	2,500,144	12,932,618
California	14,495,550	7,463,481	15,378,016	9,770,990	47,108,037
Colorado	5,682,364	3,795,562	1,437,773	2,303,899	13,219,598
Connecticut	2,047,610	1,031,625	3,350,400	1,656,627	8,086,262
Delaware	1,547,437	1,031,625	354,790	1,074,610	4,008,462
Florida	5,130,153	3,353,655	3,102,050	2,930,809	14,516,667
Georgia	7,815,446	5,968,900	2,521,183	4,043,968	20,349,497
Idaho	3,892,551	2,737,969	332,940	1,734,315	8,697,775
Illinois	12,165,819	6,625,129	12,098,383	8,105,625	38,994,956
Indiana	7,496,268	5,167,153	4,138,722	4,219,185	21,021,328
Iowa	7,626,317	5,581,064	2,053,788	3,545,901	18,807,070
Kansas	7,663,996	5,365,736	1,625,973	3,169,963	17,825,668
Kentucky	5,820,681	4,832,404	1,796,525	3,216,870	15,666,480
Louisiana	4,920,796	3,561,657	2,535,907	2,824,725	13,843,085
Maine	2,649,624	1,896,107	723,013	1,387,518	6,656,262
Maryland	2,776,160	1,696,909	2,936,043	2,041,509	9,450,621
Massachusetts	4,011,085	1,489,563	7,200,476	3,655,217	16,356,341
Michigan	9,800,544	5,980,275	8,051,625	6,180,407	30,012,851
Minnesota	8,190,042	5,781,659	2,817,034	3,899,163	20,687,988
Mississippi	5,645,528	4,702,659	957,795	2,754,064	14,060,046
Missouri	9,204,910	6,228,008	4,260,427	4,707,609	24,400,954
Montana	6,342,359	4,362,904	407,361	2,419,110	13,531,734
Nebraska	6,157,523	4,366,021	1,014,628	2,436,110	13,974,282
Nevada	4,077,521	2,725,122	131,752	1,785,146	8,719,541
New Hampshire	1,547,437	1,031,625	512,324	1,074,610	4,165,996
New Jersey	4,083,014	1,373,973	7,572,939	3,753,573	16,783,499
New Mexico	5,133,654	3,526,748	567,747	2,081,652	11,309,801
New York	14,843,409	5,948,112	23,123,251	12,160,327	56,075,099
North Carolina	7,825,095	6,684,414	2,223,008	4,380,315	21,112,832
North Dakota	4,581,331	3,326,558	292,522	1,926,290	10,126,701
Ohio	11,011,801	6,698,563	10,010,967	7,369,446	35,090,777
Oklahoma	6,757,731	4,838,876	1,890,029	3,094,245	16,580,881
Oregon	5,398,620	3,772,987	1,387,166	2,330,696	12,889,469
Pennsylvania	12,394,224	7,375,924	13,096,579	9,134,669	42,001,396
Rhode Island	1,547,437	1,031,625	1,236,688	1,074,610	4,890,360
South Carolina	4,252,157	3,520,756	1,190,023	2,331,532	11,294,468
South Dakota	4,932,082	3,522,524	336,008	2,024,381	10,814,995
Tennessee	6,843,362	5,333,724	2,501,615	3,689,779	18,368,480
Texas	20,484,493	13,716,335	8,287,665	9,889,608	52,378,101
Utah	3,630,545	2,401,759	733,035	1,661,565	8,426,904
Vermont	1,547,437	1,031,625	269,364	1,074,610	3,923,036
Virginia	5,997,988	4,661,747	2,697,681	3,468,488	16,825,904
Washington	5,220,265	3,487,400	2,610,298	2,744,023	14,061,986
West Virginia	3,443,635	2,997,967	1,125,885	2,045,557	9,613,044
Wisconsin	7,460,276	5,205,165	3,387,619	3,939,418	19,992,478
Wyoming	3,938,080	2,668,860	188,100	1,746,386	8,541,426
Hawaii	1,547,437	1,031,625	581,732		3,160,794
District of Columbia	1,547,437	1,031,625	1,494,531	1,074,610	5,148,203
Puerto Rico	1,639,336	1,713,145	1,487,020		4,839,501

Total amounts authorized for the various federal-aid categories for the fiscal year 1956 are: Primary, $315,000,000; Secondary, $210,000,000; Urban, $175,000,000; Interstate, $175,000,000. Grand total, $875,000,000. Figures in this table total a little less due to administrative deductions.

Federal-Aid Apportionments

Apportionment of $875 million in federal-aid highway funds for the fiscal year 1956, which begins July 1, 1955, was announced by Secretary of Commerce Sinclair Weeks June 30, effective July 1. (Table of apportionments for the various federal-aid categories appears on facing page.)

The apportionments are the largest in the history of the federal-aid program. They were announced several months earlier than usual, and the funds became available for commitment immediately.

"The speed-up in starting time will have a favorable impact on the economy," Secretary Weeks said in announcing the apportionment. "One immediate result will be the letting by the states in the next 90 days of approximately an additional $100 million worth of contracts over and above the amount of contracts that otherwise would be let.

"As further planning and engineering is completed this year and contracts awarded for procurement and construction, there will be a steady increase in jobs not only among highway workers but also among those in enterprises supplying road-building equipment and highway and bridge materials."

Forest Road Funds Allotted

Forest highway funds authorized for the fiscal year 1956, totaling $22.5 million, have been apportioned by Secretary of Commerce Sinclair Weeks, effective July 1. These funds are available for programming of roads in national forests in 40 states, Alaska and Puerto Rico, as follows:

Ala.	$ 64,334	N. H.	$ 120,204
Ariz.	1,276,414	N. M.	913,427
Ark.	305,556	N. C.	137,899
Calif.	3,218,818	N. D.	80
Colo.	1,611,830	Ohio	12,130
Fla.	130,656	Okla.	15,512
Ga.	78,999	Oreg.	3,098,057
Idaho	2,289,655	Penna.	59,956
Ill.	27,071	S. C.	73,685
Ind.	14,450	S. D.	175,551
Iowa	730	Tenn.	75,413
Ky.	46,224	Texas	71,199
La.	51,897	Utah	746,883
Maine	8,425	Vt.	39,640
Mich.	240,995	Va.	145,940
Minn.	309,148	Wash.	1,561,709
Miss.	106,105	W. Va.	88,737
Mo.	114,561	Wisc.	125,457
Mont.	1,791,703	Wyo.	959,455
Neb.	20,991	Alaska	1,960,694
Nev.	403,466	P. R.	6,344

Tough Digging in Close Quarters

IN PORTLAND, MAINE, the soil in many places can be downright troublesome, with large stones and boulders mixed in with smaller stones and gravel, a combination that makes tough digging. Add to this the fact that trench lines in many places run right alongside rows of trees, poles and other obstructions and you've got a really mean job of trenching.

Yet this CLEVELAND Model 95 "Baby Digger" is moving right along on the job—as shown by the discharge from the conveyor—coming through with the same dependable performance that has made it an outstanding favorite for over 30 years.

This is the kind of job where CLEVELAND'S famous multi-speed transmission really pays off, enabling the operator to select the *right* combination of power and speed for the particular job condition from more than 30 available combinations of digging wheel and crawler speeds.

The "Baby Digger's" compactness and maneuverability also played important parts in completing this job right on schedule in spite of numerous obstructions. The large boulders deposited to the left of the trench in the photo show that good use was also made of CLEVELAND'S reversible conveyor on this job.

Write for descriptive bulletins and specifications, or get the full story on CLEVELANDS from your local distributor.

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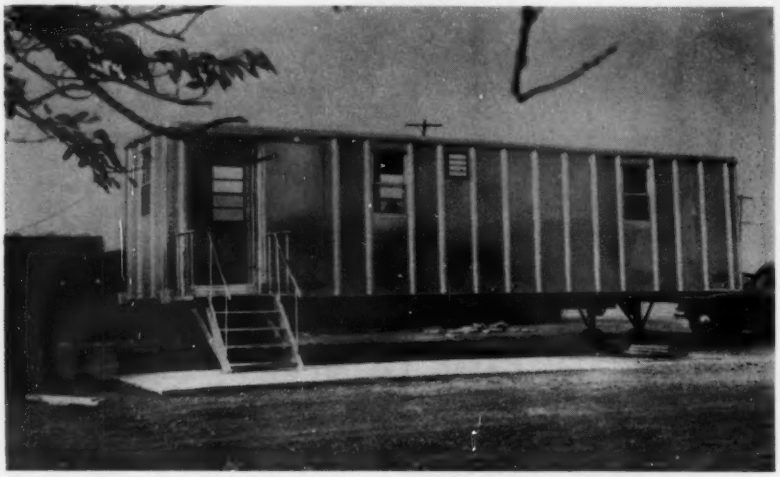
Contractor's Special Field Offices Roll to Jobs

» GENERAL contractors whose operations carry them far afield are turning more and more to mobile offices to save labor, time and cost of materials involved in setting up and vacating stationary field offices.

Equipment used varies from converted buses and trailers to the more elaborate special Pullman car and floating field office and workshop employed by Merritt-Chapman & Scott Corp. (July 1953 CONSTRUCTOR).

The truck trailer illustrated below, two of which have been put to work by James D. Morrissey, Inc. (AGC), Philadelphia firm, was designed especially as a field office and built by the Strick Co., Philadelphia. This rolling office has been placed on the Pennsylvania Turnpike extension project in Bucks County, Pa., where the toll road will meet the New Jersey Turnpike.

Partitioned in half, it is of aluminum construction, 35 ft. long, 7½ ft. wide inside, and features two offices separated by a sliding door. Walls and ceiling are insulated and finished in plywood, floor is of inlaid linoleum, and equipment includes fluorescent lighting, exhaust fan at each end, radiant electric heat, and telephones. There are eight windows, storm sash, and steps.



Two Chamber Groups Study Highway Policies

A tentative draft of highway policies to be recommended for adoption by the Chamber of Commerce of the United States is being prepared by the chamber's Subcommittee on Highway Development. At a meeting of the subcommittee July 6, the chairman, Pyke Johnson, past president of the Automotive Safety Foundation, and the secretary, F. Stuart Fitzpatrick, of the chamber's staff, were authorized to write a tentative draft, based on a draft previously prepared by the Construction and Civic Development Department Committee. Suggestions made by subcommittee members at the meeting were being considered.

The tentative draft, it is understood, will be submitted to subcommittee members for comments and suggestions, and a second draft will then be prepared and sent to them prior to the fall meeting.

A.G.C. Represented

George Koss, Koss Construction Company, Des Moines, Iowa, national vice president of The Associated General Contractors of America, is a member of the subcommittee. Other A.G.C. representatives who attended the July 6 meeting as guests were H. E. Foreman, managing director; James D. Marshall, executive director, and Archie N. Carter, manager, Highway Division.

Clem D. Johnston, president of the Chamber of Commerce of the United States, said the chamber expected to lay before President Eisenhower and the state governors late this year a comprehensive recommendation for street and highway improvements throughout the nation. Mr. Johnston said the recommendations would place particular emphasis on President Eisenhower's proposal for a $50 billion highway improvement program announced at the Governors' Conference July 12.

Another chamber group, the newly appointed Special Advisory Panel on Highways, Streets and Urban Transportation, will make a study of chamber policy in the fields of highway finance, local transit, and urban traffic and parking problems. Its initial meeting will be held in Washington Sept. 15. Thomas A. Ballantine, president, Louisville Taxicab and Transfer Company, and a director of the U. S. Chamber, is chairman of the group.

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Chamber Seeks Expanded Research, 'Building Science' Through B. R. I.

• Improved End Product Answer to 'Shrinking Market'

» THE CONSTRUCTION and Civic Development Department Committee of the U. S. Chamber of Commerce has called on the construction industry to coordinate its research activities in to a "building science" which could expand the markets for the industry.

This can best be done by supporting the recently-expanded Building Research Institute of the National Research Council, the Department Committee states in a booklet prepared by its subcommittee on Technological Research and Construction Markets.

Co-chairmen of the subcommittee are William N. Carey, executive secretary of the American Society of Civil Engineers; and E. R. Purves, executive director of the American Institute of Architects. A.G.C. representatives on the subcommittee are Martin W. Watson, past A.G.C. president, who is chairman of the Department Committee; and H. E. Foreman, managing director, national A.G.C.

The booklet defines building construction as a many-sided industry made up mostly of small businesses which develop technical research in each field separate from the others. There is no "collective responsibility" for solving broad problems which can not be solved by one segment of the industry alone, it adds.

'Necessity Market'

With modern buildings made more complex by equipment necessary to meet present-day standards, the problem of coordinating design and engineering skills is a challenge to the industry, the subcommittee writes.

In the past the industry's market has been a "necessity" market based on meeting, not developing market demands. In order to assure the industry of a continuing large market of building construction, the end product —buildings themselves—must be improved for customer-appeal in usability, comfort, and convenience, and must give more for the dollar.

The result of the new approach to market development, the booklet continues, will be a technology that amounts to a "building science." This idea must be carried forward by research-minded men from all sectors of the building industry.

To counteract what is called a shrinking necessity market now that post-war building is leveling off, the subcommittee recommends that the industry (1) develop by research future buildings so attractive and superior to existing ones that owners will abandon their old ones for the new ones; (2) promote a "modernization market" as an alternative to building new buildings; and (3) lower the cost of buildings by giving the owner more building for his money. The booklet states in part:

"Developing the market for buildings requires a concerted effort to improve whole buildings as the end-products in which the independent consumer can become interested. Research and product development on individual components of a building are the necessary beginning. . . .

"The building industry's answer to the challenge of the shrinking necessity market is research—for better buildings and expanding markets."

Construction Industry Largest

Total construction last year topped all others, the booklet states. Construction also accounted for over one-eighth of the nation's working force; while consuming nearly all of the cement, gypsum, and clay, two-thirds of the lumber; one-third of the copper; one-fifth of the lead, zinc and aluminum; and one-sixth of the iron and steel.

It adds that the industry is made up of tens of thousands of firms employing less than 50 persons, and that "this independent and uncoordinated mass of economic activity fabricates the most enduring products for our high standard of living."

Despite the vast dispersion of elements within the construction industry, technological advancement does take place, the report continues. Each industry group makes its contributions with its own operations—the architect with better arrangements; the engineer with more efficient systems; the contractor and workmen with improved methods of construction; and the manufacturer with better materials.

Some examples of building research are seen in new products and materials, especially cement, steel, lumber and structural clay; the prefabrication of wall and roof systems; air conditioning, ventilation, and electrical engineering; modular coordination as a standardization of construction measurement; and the modernization of the home to present-day living.

Summing up the result of research within the building industry, the subcommittee states that "new principles of design and engineering stimulate new products to satisfy design requirements. When this complete concept of building research is understood, then the meaning of a building science begins to appear."

Of the three basic human requirements—food, health and shelter—agriculture and medicine are generally regarded as complete and integrated sciences benefiting from extensive research.

Today, building technology, which provides the nation with shelter, is gaining the status of a science, but leaders in the industry must do more to integrate the many arts and sciences that produce the knowledge for over-all progress in building before this status is recognized.

'Systems Research'

The subcommittee notes that the building industry has not reached the level of integrated research on the final end product—the house or building—comparable to research in other industries. "Systems research," defined as a method of study that puts research "under one roof," is said to take the end product into consideration.

In applying systems research to the building industry, the subcommittee states that a two-way flow of information, plus personnel contact, would make the collected information available at a central point where it could be translated into terms of the entire industry's requirements.

To those who say that the building industry's components are too diverse to integrate research under one roof, the subcommittee said that "it is these factors that make some form of systems research even more important."

Hospital an Example

Cited as an example was the planning of a hospital: Designers must draw from a vast range of sciences and technologies in addition to archi-

tecture and engineering before the hospital becomes a functional and lasting building meeting the needs of today's economics.

In the specialized field of hospital construction thought must go into the efficient use of space. Operating room procedures, distribution of patients into various medical categories, isolation, elevator location, food distribution, and safety are a few of the factors which are a part of the systems research necessary to improve the efficiency of hospitals.

Also the modern hospital demands the integration of a maze of mechanical and electrical installations for the comfort and health of patients and workers. On the structural side, low initial cost, low maintenance, durability, and appearance are prime considerations.

To carry out the systems research idea in the construction industry the materials manufacturers, architects, engineers, suppliers, and contractors must realize that research aimed at building better buildings is an investment in their own furture as well as the future of the construction industry. It is the way for the industry to create new markets. And, the way to do this job is through the Building Research Institute, the subcommittee concludes.

Institute Expands

B.R.I.'s executive secretary, William H. Scheick, who also directs the activities of Building Research Advisory Board, announced this past spring an expanded program by B.R.I. which would bring it into closer partnership with B.R.A.B.

At a recent meeting of B.R.I. in Hershey, Pa., the institute took over most of the functions of B.R.A.B., except its advisory activities. B.R.A.B. now handles conferences on a broad scale concerning technical matters, while B.R.I., serving as an all-industry forum, is responsible for matters dealing with specific products of the industry.

B.R.I.'s next meeting, to be held Oct. 27-28 in Washington, D. C., will be a part of the institute's conference on plastics in building.

Last month the institute's newsletter, *Building Science Reporter*, was first published replacing *B.R.A.B. Notes* as the official reporting voice of the institute's scientific and technical activities.

Lease-Purchase Law on Limited Scale Passes

- GSA Policy Cites Careful Selection and Keen Competition

» CAREFUL SELECTION of projects, keen competition among bidders and low interest rates to investors will govern the placement of federal contracts for the construction and purchase of post offices and other public buildings under the new lease-purchase law.

The law signed by President Eisenhower last month permits the Post Office Department and the General Services Administration to purchase public buildings by lease contracts ranging in terms from 10 to 25 years. At the end of this time the title of the property would revert to the federal government. Under the law GSA is permitted to spend up to $5 million in annual payments the first year. The money is to come out of current appropriations, principally rent funds. The Post Office Department is limited to spend only $3 million the first year out of current rent appropriations for its lease-purchase program.

GSA Policy Outlined

Edmund F. Mansure, administrator of GSA, outlined his agency's lease-purchase program as follows:

"To accomplish this most desirable result, lease-purchase authority will be employed for purposes to which it is ideally suited and under safeguards which will assure its proper use. By adhering to this broad policy, we will achieve greater savings and efficiency in our real estate operations and enhance the operating efficiency of the agencies which occupy lease-purchase buildings.

"Lease-purchase is just another method of acquiring property. We will pay for it with rent money over a fixed number of years. Then the government will own the property."

Peter A. Strobel, new commissioner of the Public Buildings Service, (see story on page 47), announced a five-point policy that will assure the government the "most for its money" in carrying out the lease-purchase plan. It reads in part:

(1) Space requirements to be filled by lease-purchase must be urgent and permanent. Temporary needs will be filled by rentals and for long-range requirements, not urgent, construction appropriations will be sought.

(2) New building, for the most part, will be acquired by lease-purchase.

(3) Design and construction will be carried out in accord with GSA specifications. GSA plans to have private architects and engineering firms, familiar with local problems, prepare designs.

(4) Approved projects must be clearly justified. In general, GSA will endorse only those projects designed to replace rented space.

(5) There should be widespread competition for lease-purchase contracts. Potential investors will have the opportunity, by competition, to provide the capital to furnish the government with lease-purchase buildings. These contracts, in comparison with short-term leases, assure a safe investment with full return within 10 to 25 years. Such investments would return investors low interest rates in line with the high degree of security.

Competition Encouraged

Mr. Strobel added that besides encouraging competition among investors, "The government will insist on competition in all elements of the actual construction of the projects."

He cautioned, however, against thinking that GSA will rush into "a huge lease-purchase program." Mr. Strobel added:

"The program will go forward in carefully tested steps in accordance with our policy principles. Prudent exercise of the new authority is dictated not only by the previously mentioned limitations, which were written into the law itself, but also by the fact that we are pioneering a new avenue for the federal acquisition of property."

'Third String in Bow'

Earlier Mr. Mansure had said, "We (GSA) have rented property in the past, and will continue to do so in the future. We have constructed buildings with direct capital appropriations, and we expect to do so in the future. Lease-purchase does not replace these traditional methods. Rightly, it is a third string to our bow."

The Post Office Department, due to state its policy regulations early this month on administering the law, is expected to adopt a program similar to that of GSA.

Miami Incinerator to Generate Steam for City

- $3.3 Million Project, Largest of Its Type, Nears Completion

» THE CITY of Miami's new $3.3 million refuse incinerator is designed to accommodate the future needs of a rapidly-growing metropolitan area and at the same time generate steam for certain city government functions.

When completed this fall the incinerator will be one of the most modern of its kind in America. It will have a daily capacity of 900 tons and will be able to serve the nearly one million people expected to be living in the greater Miami area by 1958.

A part of the incinerator plant will be the largest waste heat-steam generating system in use by any incinerator today. The boiler plant will have a complete system of steam-generating equipment, with a hot process water-softening system using lime-soda treatment. A system of controls will operate water-cooled gates to allow hot gases to heat the boilers, or to by-pass to the spray chamber, depending on load demands.

Steam generated by this system will supply the entire needs of a modern 1,200-bed hospital, the medical section of the University of Miami; the Dade County Blood Bank; the city water department's steam-turbine pumping station that has a 22 million gallons per day capacity; and the city's garage and truck-cleaning equipment.

Being built by John B. Orr, Inc., A.G.C., Miami, the plant will take up a 10-acre plot which will be landscaped and beautified.

Joseph J. Orr, firm president, said recently that since Miami is expected to become the South's largest city within the next four years, every municipal building program must be designed to accommodate this progress.

"According to figures released by the First Research Corporation of Florida, more than 920,000 people will be living in Metropolitan Miami by 1958. The anticipated increase in population was a major concern when the new Miami incinerator plans were completed," he said.

Congestion of garbage trucks will be eliminated by a streamlined roadway system to and from the plant and an interior parking area for 30 trucks. The inlet road has a two-sided scale house and automatic weight-printing and recording devices.

Three cranes lift one of the incinerator's two 150 ft. high self-supporting steel stacks into place as other one lies near by. In background is main incinerator building which houses boiler house and crane gallery.

Plant Layout

In keeping with the building trends of the area, offices in the plant will be air conditioned. The main building of the plant will be entirely enclosed, including the dumping pit and boiler plant.

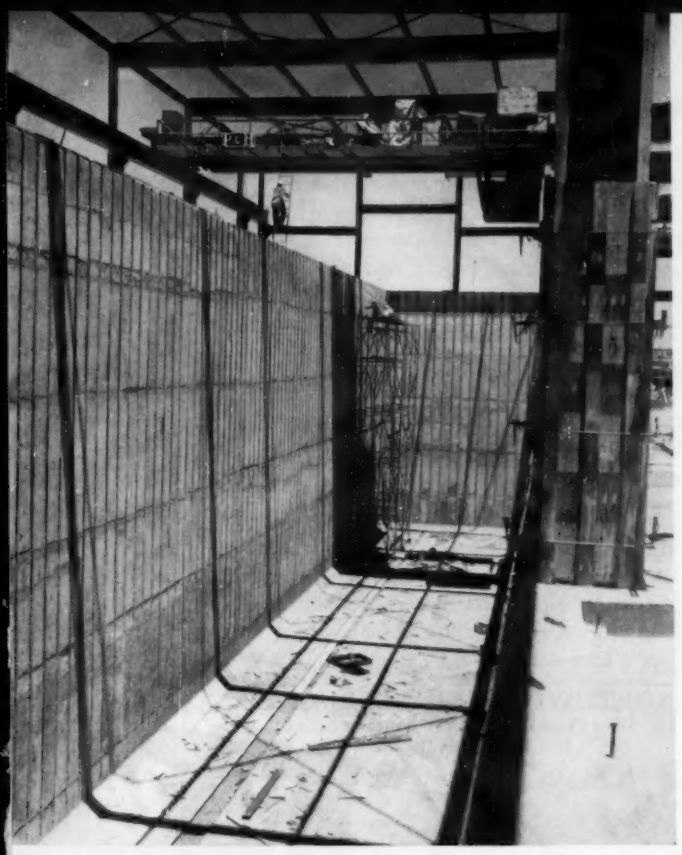
The pit is approximately 175-ft. by 30-ft. and has a 3,600-cu. yd. capacity. A pair of traveling cranes, each with 2½ cu. yd. buckets, will feed the refuse into the six furnace feed hoppers, which have electric gates. The furnaces are set in two batteries of three each, and connect separately to three-compartment combustion chambers.

The incinerator will also be the first of its kind to have complete spray-type fly ash eliminators. The gases from the combustion chambers will pass either over the four boilers or bypass directly to the spray chamber.

In the spray chamber a set of rain sprays and fog sprays, to be fed by well water, will cool the hot gases as they pass over wet eliminator plates. The waste water and fly ash will then be flushed into a refractory trough that flows into the settling tank.

The cooled gases are to be carried up the insulated steel stacks, while the fly ash is removed from the settling tanks and taken away by trucks.

A central control system will give the superintendent complete control over all operations. Visual register-



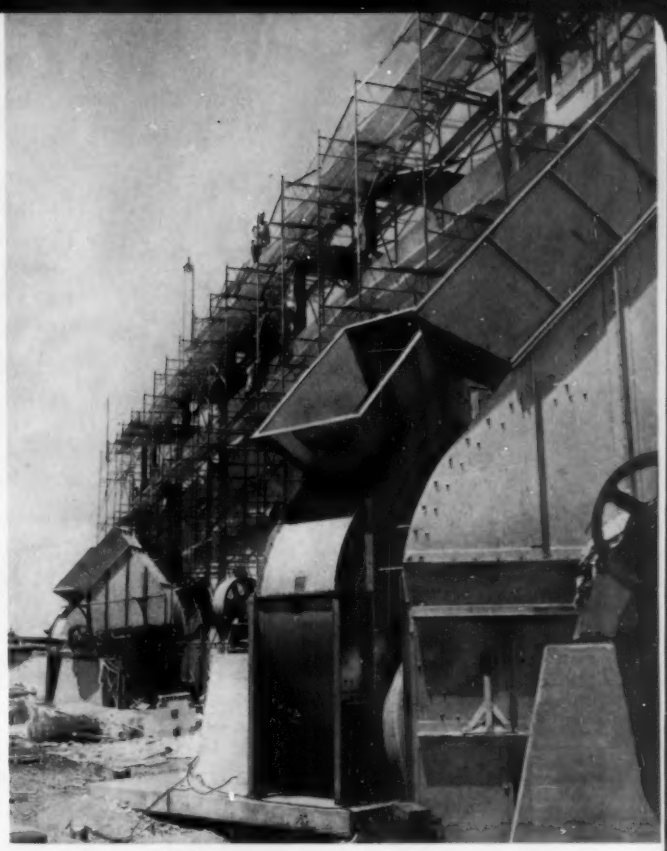


Photo on left shows dumping pit with 3,600 cu. yd. capacity and traveling crane that rides 45 ft. above floor. The pit has train rails embedded in the walls and floor of pit to reduce damage from swinging bucket. Picture on right shows boiler house with draft fans to expel the gases up the stacks.

ing and card recording instruments are also to be centered at this point. From his "office" he can automatically control the feed to each furnace, regulate the furnace burning rate and the forced-draft fans, as well as the boilers.

Maurice H. Connell and Associates Inc., was commissioned by the City of Miami as consulting engineers on the project. The firm worked from 1948 to 1952 studying the different methods of incineration and refuse disposal used by different cities. It was decided, after thorough investigation, that the basic design of the Nichols Engineering and Research Corporation best served Miami's needs.

The Connell firm incorporated into the Nichols' design many difficult features of construction, unique in their application, and requiring considerable experience and knowledge. These conditions are being carried out by the Orr Company.

Specialists in the design of incinerators claim that the Miami plant is the largest of its type being constructed anywhere. This does not mean that there are no other plants of similar capacity, stated Mr. Orr. What it means is that these other plants do not contain as complete a system for steam generation.

Strobel Named to Head PBS

Peter A. Strobel, New York consulting engineer, was named in June to succeed W. E. Reynolds as commissioner of the Public Buildings Service. Mr. Reynolds retired after directing for 21 years the agencies in charge of federal buildings.

In announcing Mr. Strobel's appointment, Edmund F. Mansure, General Services Administrator, called the Public Buildings Service the "world's largest operation in real estate management," working with a budget of over one billion dollars. Responsibilities of the agency include the parcelling out of more than 118 million sq. ft. of floor space among federal agencies, furnishing maintenance services to 113.3 million sq. ft. in and out of Washington, D. C., and making necessary repairs and improvements on 103 million sq. ft. in more than 5,500 federal buildings outside of Washington.

The National Industrial Reserve with its 45 industrial plants and the government inventory of surplus real property are also part of PBS activities. In fiscal 1953 the service had in the design or construction stages 132 major building projects at an estimated cost of $214.2 million.

Mr. Strobel was born in Denmark and holds an M.S. degree in civil engineering from the Royal Technical University of Copenhagen. He came to the United States in 1925, shortly after his graduation. During his American career he was a structural steel draftsman, designing engineer, field inspector, chief engineer, and consulting engineer. At the time of his appointment Mr. Strobel was a partner in the consulting engineering firm of Strobel and Salzman of New York City.

Firm Well Known

Mr. Strobel's firm is known for the design of portable airplane hangars for the Corps of Engineers, and the design and construction of an aircraft assembly plant at Hagerstown, Md.

Mr. Reynolds, during his years with PBS, is credited with supervising the renovation of the White House, and the construction of the General Accounting Office, the terminal buildings at the Washington National Airport, and the Clinical Center of the National Institutes of Health in Bethesda, Md.

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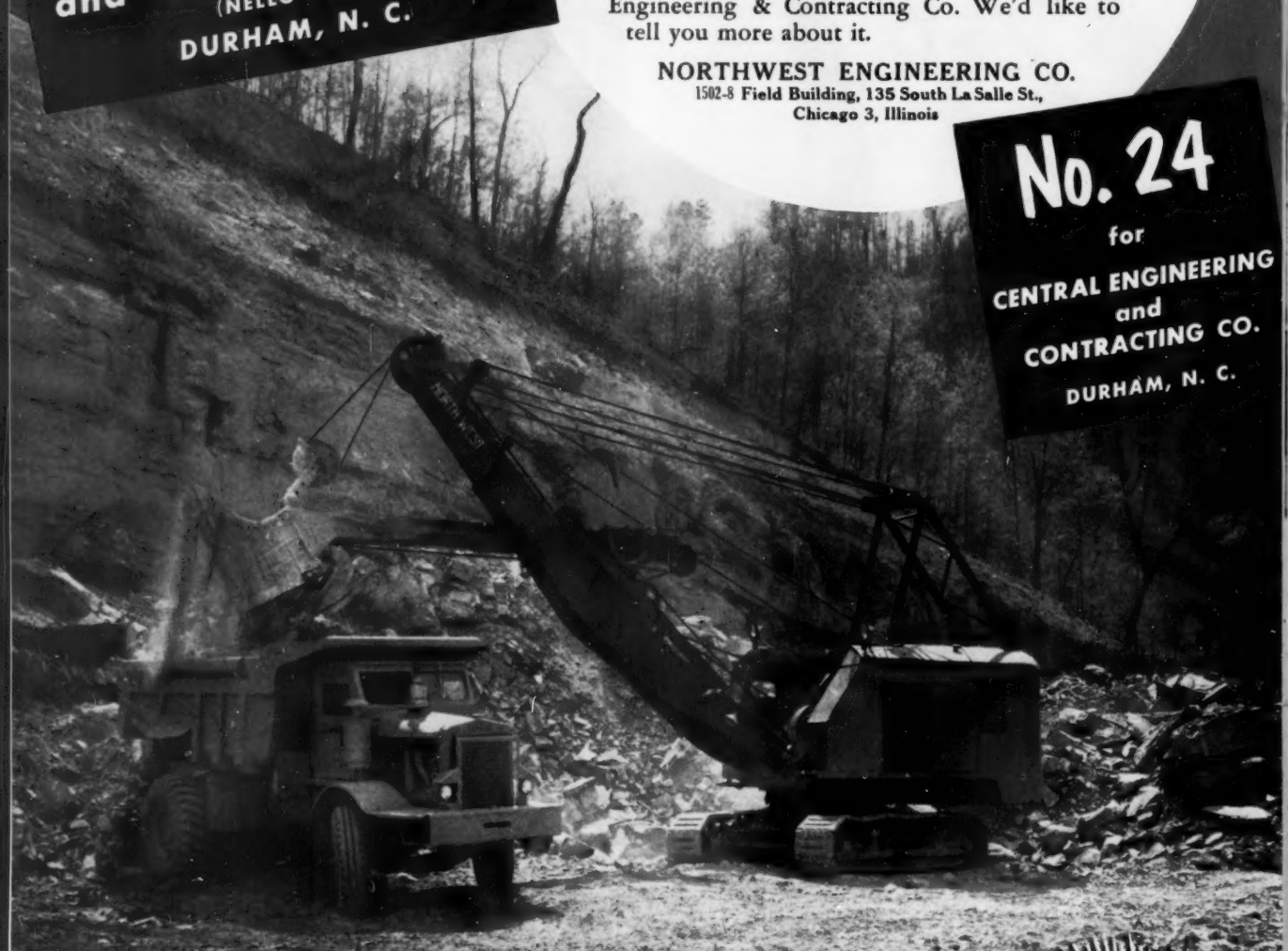

Has Your Shovel Stood the ROCK TEST

NORTHWEST

CRAWLER and TRUCK MOUNTED SHOVELS • CRANES • DRAGLINES • PULLSHOVELS

The $22-million causeway, which will require 9 million tons of rock fill, is over two-thirds completed to date.

Canso Causeway Is Mammoth Fill

• Taking 9 Million Tons of Rock from Nearby Mountain

By Dennis Pelrine

» WORKMEN have changed the face of a mountain to bring together the mainland of Nova Scotia and Cape Breton Island on Canada's East Coast.

Breaking it down (the mountain) to fundamentals it could be said that 9 million tons of rock fill are being transferred from the face of Porcupine Mountain into the waters of the Strait of Canso. When this work is completed the Canso Causeway will be a reality to the islanders who for years have had to rely on a train ferry service as their chief link with the mainland. When drift ice blocked the strait the islanders were isolated and valuable commercial shipments lay idle on rail sidings.

Politically, Cape Breton Island is a part of the Province of Nova Scotia, but geographically its rich coal fields, booming steel mills and recently-discovered uranium deposits have been separated from the mainland by the 3,600-ft. wide Canso Strait.

Argued 50 Years

For half a century the respective merits of a bridge or tunnel to link the two shores have been argued. In 1952 Canada's Federal Department of Transport settled the issue by awarding a $22 million contract for the Canso Causeway to Northern Construction and J. W. Stewart Ltd. of Vancouver, B. C.

Where nature had proved perverse by inserting the strip of water between the two sections of land, she relented by locating Porcupine Mountain on the nearby shore from which rock could be dropped into the strait, forming a highway.

The task was begun in June 1952 when an International TD-24 dozer pushed the first load of rock into the water. The first vehicle is expected to cross the causeway early next year.

4,300 Feet Long

On completion, the causeway will measure 4,300 ft., incorporating a curve near each end to lessen pressure expected from the annual spring ice floes which will descend from Arctic waters through the Strait of Belle Isle and the Gulf of St. Lawrence.

Less than a quarter-mile from the causeway entrance on the mainland side, hardrock drillers regularly set the stage for a coyote blast on the mountain side. Tunnels 3 ft. wide by 4 ft. high are driven into the mountain some 50 ft. along with cross tunnels, driven at right angles, for approximately 40 ft.

Preparation for Blast

At each end of the cross tunnels, a carefully calculated charge of C.I.L. ammonia dynamite is packed and primed with "primacord" millisecond delay fuse. At the midway section of each tunnel a further charge is placed with fill packed between each charge. Depending on density of the rock composition, a further charge may be placed at the junction of main and cross tunnels and the main tunnel is then backfilled to the mouth. In larger blasts, 400 fifty-pound cases of 40% ammonia dynamite are planted.

When the charge is set off there is

Large bite out of the mountain's face (center background) shows area from which the rock is being taken to construct causeway. Note workmen's camp by road.

Two-man crew on platform installs Armco Liner Plates at tunnel head. Mucking machine follows to remove the lower part of core.

A MILE OF LINER PLATE

helps this sewer under roads and rails

How to install a million dollar sewer job in bustling Los Angeles? Open trenching would have disrupted traffic on busy streets and on more than 20 railroad tracks. But by tunneling with Armco Liner Plates, the contractor was able to keep work underground and out of traffic's way.

The Liner Plates also filled a second need. They were left in place to provide the outside form for the concrete lining.

Armco Liner Plates are 18-inch wide curved plates, flanged along two sides, with the corrugations extending *through* the longitudinal joints. They have a high strength-to-weight ratio. Individual plates are not too heavy for one or two men to handle and install.

Use Armco Liner Plates for speed and safety on your next tunneling job. They are available in a wide range of sizes and gages. Write for details. Armco Drainage & Metal Products, Inc., 4494 Curtis Street, Middletown, Ohio. Subsidiary of Armco Steel Corporation.

ARMCO LINER PLATES ARMCO®

little surface disturbance as the face of the mountain shrugs off thousands of tons of broken rock which are scooped up by a pair of Bucyrus-Erie 120-B electric shovels equipped with 6 cu. yd. dippers and loaded into the eleven 34-ton FFD Euclid trucks for the downhill haul to the causeway.

At the base of the mountain, the trucks pause on a 100-ton capacity Howe scale where the load is weighed. Afterwards they continue to the end of the project where the load is dumped. At this point, bulldozers push the rock off the end of the causeway to extend its projection.

One Fatal Accident

Throughout the operation, a high premium is placed on safety with strict standards of equipment and operation maintained. To back up this policy, the company keeps a Chevrolet half-ton panel truck fitted as an up-to-date ambulance ready to make emergency runs to the hospital in Antigonish 30 mi. away.

Despite all precautions, the first serious accident occurred in February of this year, almost two years after the start of work, when a driller died as a result of an 8-ft. fall from the drilling face.

While a causeway is defined as a pathway or paved road across wet ground or shallow water, the particular "shallow water" in this case measures up to 187 ft. with an additional 25 ft. of light silt. In spite of depth, currents and drift ice, the job is progressing slightly ahead of schedule.

Will Carry Railroad

On completion, the causeway will boast a paved surface 80 ft. wide tapering off to a base approximately 600 ft. wide. The surface will be 13 ft. above high tide level. In addition to the modern highway, the finished causeway will feature a single track rail line providing the long-sought commercial link between Cape Breton and the mainland.

Adding a final touch to the project, the Halifax, N. S. firm of T. C. Gorman Ltd. is constructing an 80-ft. navigation lock at the Cape Breton end of the causeway.

On completion of the job, Northern Construction and J. W. Stewart Ltd. will not only have provided Nova Scotia with a link to its most industrial area, but will also have racked up a personal achievement in having constructed one of the world's great causeways.

Engineers' Vicksburg Station Ends 25 Fruitful Years

» SEVERAL thousand visitors from all over the country attended the June celebration of the Waterways Experiment Station's 25th anniversary at Vicksburg, Miss.

Maj. Gen. Samuel D. Sturgis, Chief of Engineers, who addressed the throngs, headed the list of Washington dignitaries at the ceremonies, which included open house periods for inspection of the largest collection of engineering exhibits and demonstrations of its kind in the world.

The research and experimental agency of the Corps of Engineers conducts investigations of hydraulics, soil mechanics, and flexible pavement on a scale of unparalleled magnitude. These unique operations were shown at a series of 19 stations in the area.

The station was established in 1929 after the disastrous 1927 Mississippi River flood which inundated some 20,000 square miles of several states, drowning 350 people and leaving 600,000 others homeless, and destroying 2 million farm animals and 4 million acres of crops.

A successful pioneer in the use of scale models in hydraulic studies, the station later was assigned research and development responsibilities for all of the Corps' river and harbor work. In this work, its models permit inexpensive studies of design in advance, thereby permitting savings in the final structures. The Soils Division was added in 1932 to conduct research in earthen dams and levees, and its program was expanded during World War II to include development of flexible pavements.

The Concrete Division, which was transferred to Vicksburg in 1946 from New York, carries out a vast experimentation and testing program to find better mixes, aggregates and uses of concrete.

While the use of hydraulic models seems to have originated at the University of Michigan, was refined to some extent in Europe, then re-imported to the Vicksburg station, it "has never been so boldly, imaginatively, or effectively applied as in the case of the great Mississippi's model covering several acres" in Mississippi, General Sturgis pointed out.

To date, the station has constructed more than 300 models of dams, levees, spillways, canals, estuaries, and harbors, with the result of at least $100 million estimated to have been saved by enabling the Corps to devise better and more efficient designs as less cost.

There have been other indirect benefits difficult to estimate.

For example, in 1952 when the Missouri River was approaching flood stage, engineers at the giant model at Vicksburg reproduced the flood conditions from information on rainfall and runoff telephoned in along the route by army engineers. As a result, the station predicted, with extraor-

Aerial view of 500-acre Vicksburg reservation of the Waterways Experiment Station shows Soils Division and administrative office building in lower left center, hydraulics building and model test area, center, and flexible pavement and soils test area, upper center. The Concrete Division occupies 800 acres near Jackson, Miss., including a 220-acre watershed model.

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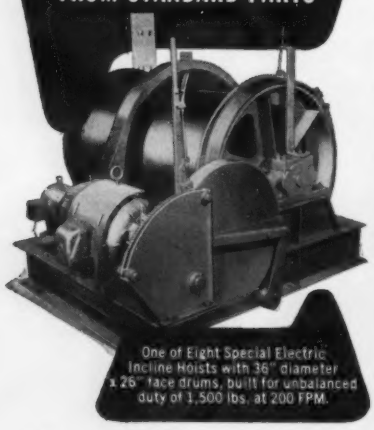

One of Eight Special Electric Incline Hoists with 36" diameter x 26" face drums, built for unbalanced duty of 1,500 lbs. at 200 FPM.

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dinary accuracy, and about a week in advance, the time and level of the crest at each point along the endangered levees. This enabled the station to telephone back their results to the flood-fighters who could then concentrate their efforts at the most critical points. These forecasts were credited with preventing some $65 million of damage in the area of Council Bluffs and Iowa City alone.

Regarding concrete work of the station, General Sturgis stated:

"Despite increased costs of labor and materials and increasingly rigid specifications—factors which might well have doubled our concrete costs—the unit bid price for gravity dams has actually decreased by 30 per cent since 1948. This happy result is due in large part to the discovery of better concrete techniques and less expensive mixes."

The Waterways Experiment Station also plays a vital part in the other role of the Corps of Engineers' two-fold responsibility—provision of the construction base for America's defense needs.

In this work, its investigations lead to ever-improving designs for pavements and runways that can handle every type of aircraft, and housing, bases and installations of all kinds and sizes in all sorts of terrain under every conceivable climatic condition.

Col. C. H. Dunn is the director of the Waterways Experiment Station.

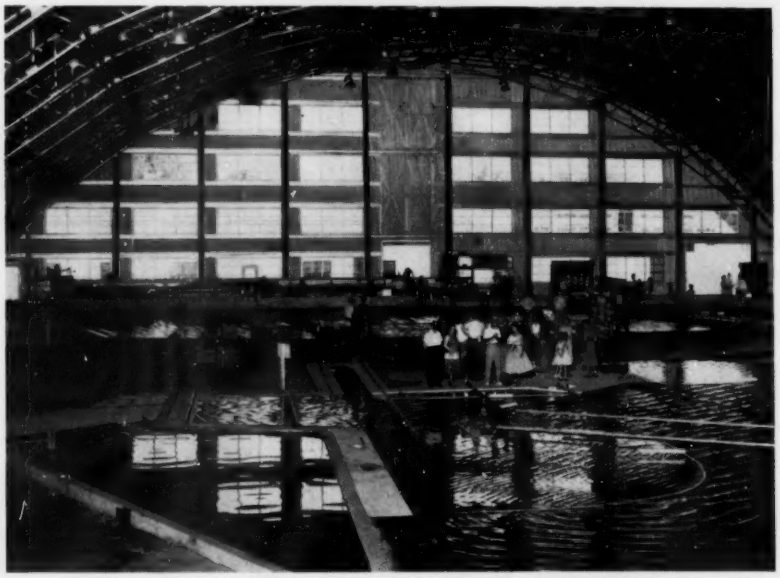
Five former directors attended the celebration: Brig. Gen. Herbert D. Vogel, now division engineer, Southwestern Division, Dallas, Texas; Col. Francis H. Falkner, now resident engineer, Board of Engineers for Rivers and Harbors, Washington, D. C.; Mr. C. P. Lindner, chief civilian engineer for the South Atlantic Division, Atlanta, Ga.; Col. Carroll T. Newton, chief, Engineer Research and Development Division, Office of the Chief of Engineers, Washington; and Brig. Gen. John R. Hardin, president of the Mississippi River Commission, Vicksburg, Miss.

Water Policy Progress

Citing President Eisenhower's recent appointment of an inter-agency committee and a Cabinet committee to formulate a national water policy (July CONSTRUCTOR, page 122), Gen. Sturgis said the federal agencies are making progress in clarifying water resources development laws and seeking ways to "make them more consistent."

In his address at the Vicksburg celebration, Gen. Sturgis said of the President's action:

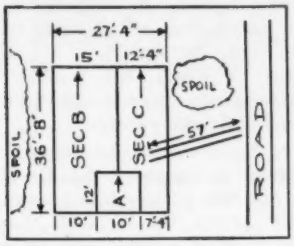
"By this action, the President has given powerful impetus to the movement for better federal water policy and has provided means for preparing more economical and smoothly working programs. Once the federal government speaks with one voice, it will be in a better position to coordinate its efforts with non-federal agencies."



Visitors inspect wave action models in huge hangar shelter.

4 Basements Dug In 9 Hours and 25 Minutes

Young and Dietrich, new, aggressive excavating contractors in Painesville, Ohio, were awarded a contract recently to dig 10 basements and sewer trenches in a new small-home development. A time study was made of the first 4 basements — they were all dug in 9 hours and 25 minutes with a Lorain TL25-J Hoe using a 36" wide, ⅝-yd. bucket. The excavations varied slightly in size, but here are figures on one basement.



Dimensions ....36'8" x 27'4" x 5' deep

Sewer

Sewer Line 57' long x 3' wide x 8' deep.
Start Sewer Line .....11:56 A.M.
Delays ..... 55 mins.
Finish Sewer Line ..... 1:50 P.M.

Total ..... 114 mins.

Basement

Start Section A ..... 1:55 P.M.
Finish Section A ..... 2:15 P.M.

Total ..... 20 mins.

Start Section B ..... 2:35 P.M.
Delays
(backfill sewer trench) .. 10 mins.
Finish Section B ..... 3:55 P.M.

Total ..... 80 mins.

Start Section C ..... 3:57 P.M.
Finish Section C ..... 5:05 P.M.

Total ..... 68 mins.

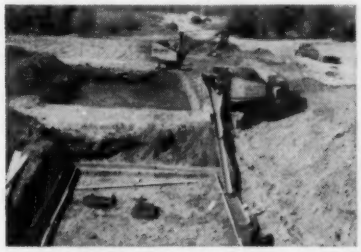
Total for Basement No. 4 — 282 mins.

4 HRS., 42 MINS.
- Sewer actual digging time ..59 mins.
- Basement actual digging time .....2 hrs. 38 mins.
- Time to backfill sewer .....10 mins.
- Delays — Lunch .....30 mins.
- Searching for outlet .....25 mins.

Basement No. 1 was dug in 2 hours and 11 minutes plus 35 minutes delay for checking grade and installing water line.

Basement No. 2 took 2 hours and 15 minutes plus 37 minutes delay for checking grade and cleaning up cave-ins on basement No. 1.

Basement No. 3 consumed 2 hours and 21 minutes plus 27 minutes delay for discussion between operator and contractor.



As basement No. 2 is finished at 3:42 P.M. the concrete footers are already being poured for basement No. 1 which was finished just 3 hours and 43 minutes earlier.

The above figures were secured on actual on-the-job operations. Nothing was planned. Nothing was staged. Production figures like these make basement digging profitable. Lorain TL25 Hoes match them all over the world.

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"KEEP OUT OF THE HOLE"

WHEN YOU DIG BASEMENTS

You won't get in the hole on costs if you use a TL-25 Hoe for basement digging, because you can work from the top to cut straight sidewalls, trim square corners and grade level floors to reduce hand finishing. You can spoil pile in any direction, dig utility trenches, and forget the problems of building ramps and the high maintenance of constant travel that is necessary with some types of equipment. TL-25's consistently dig an average residence basement in 3 hours or less. And when you get other types of jobs, it is easy to change to a dragline, clamshell, shovel or crane front end to handle them profitably. Many contractors started their careers with this versatile machine that is so adaptable to their growing needs.

There are many reasons why a TL-25 will throw more dirt per day—at less cost. Call your Thew-Lorain Distributor today for the full story.

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Improved Subcontractor Relations Sought by Use of A.G.C. Bid Form

• Executive Committee Approves Plan at July Meeting

» ANOTHER step toward improving the relationships between subcontractors and general contractors was taken early in August by The Associated General Contractors of America.

Invitation to bid forms, suggested for use in inviting bids for subcontracts, were distributed to A.G.C. members. These forms were developed to bring about more widespread observance, by both general contractors and subcontractors, of the A.G.C. *Code of Ethical Conduct* in the bidding and awarding of subcontracts.

Forms Available

The printed forms, available to A.G.C. members and other general contractors, contain this statement:

"You are advised that we subscribe to the *Code of Ethical Conduct* of The Associated General Contractors of America . . . and we intend to conform to the letter and spirit contained therein in the handling of your proposal."

The printed forms provide space for the general contractor to fill in the name and address of the subcontractor invited to submit a proposal, the name and location of the project, names of the owner and architect or engineer, the type of work for which bids are requested, where plans and specifications are available, and the time for the general contractor to receive the proposals.

The subcontractor is also asked for his bid in writing, and "that it clearly indicates the work covered, and in case of alternates, each to be listed together with prices therefor."

Also being distributed to A.G.C. members and chapters are suggested form letters which general contractors may use, or adapt to their own use, for informing subcontractors that they subscribe to the *A.G.C. Code of Ethical Conduct* in cases where it is the custom to invite subbids by postcard.

Part of Broad Program

The forms were approved by the association's Executive Committee at its meeting at the Greenbrier, White Sulphur Springs, W. Va., July 19-20. Recommendation was made by the Subcontractor Relationships Committee.

This action was taken as a part of the association's program directed toward improvement in the relationships between general contractors and subcontractors adopted at the A.G.C. 35th annual convention. The resolution activating the program stated:

"As a further step toward improvement of the procedures for the receipt of bids and the award of subcontracts by general contractors, and improvement in the relationships between general contractors and subcontractors, the 35th annual convention of the A.G.C. hereby:

"1. Encourages A.G.C. chapters to adopt programs, in cooperation with local associations of subcontractors, in subscribing to the A.G.C. *Code of Ethical Conduct* for bidding and awarding subcontracts, and purchase of materials and supplies.

"2. Endorses the development and adoption of suggested A.G.C. Invitation to Bid forms, based upon the A.G.C. *Code of Ethical Conduct,* which general contractors may use or adapt in principle for their own use in inviting bids for subcontracts. The officers and Executive Committee are authorized, upon recommendation of the appropriate A.G.C. committees, to adopt the suggested forms and have them distributed for the information of members and chapters.

"3. Encourages A.G.C. chapters to establish committees, which may invite participation by representatives of local subcontractors' associations appropriate to a particular case, empowered to hear charges of violation of the code and to make findings of fact.

"4. Authorizes the officers and Executive Committee to undertake such cooperative actions with national associations of subcontractors as they deem appropriate in helping to establish and maintain better relationships between general contractors and subcontractors."

Ethical Conduct

Section 3, "Subcontractors and Those Who Supply Materials," of the Rules of Ethical Practice of the A.G.C. *Code of Ethical Conduct* states:

"The operations of the contractor are made possible through the functioning of those agencies which furnish him with services or products, and in contracting with them he is rightfully obligated by the same principles of honor and fair dealing that he desires should govern actions toward him of architects, engineers and client owners.

"Ethical conduct with respect to subcontractors and those who supply materials requires that:

"1. Proposals should not be invited from anyone who is known to be unqualified to perform the proposed work or to render the proper service.

"2. The figures of one competitor shall not be made known to another before the award of the subcontract, nor should they be used by the contractor to secure a lower proposal from another bidder.

"3. The contract should preferably be awarded to the lowest bidder if he is qualified to perform the contract, but if the award is made to another bidder, it should be at the amount of the latter's bid.

"4. In no case should the low bidder be led to believe that a lower bid than his has been received.

"5. When the contractor has been paid by a client owner for work or materials, he should make payment promptly, and in just proportion, to subcontractors and others."

Usage Voluntary

Usage of the forms distributed by the A.G.C. are voluntary on the part of general contractors. But E. J. Wheeler, Frank Messer & Sons, Inc., Cincinnati, chairman of the Subcontractor Relationships Committee, in presenting the resolution to the convention stated:

"We believe that reputable general contractors will want to use forms which state that they will abide by the A.G.C. *Code of Ethical Conduct,* because by doing so they will give added assurance to subcontractors of their intention and desire to conform to the recognized ethics of the industry in the award of subcontracts for public and private projects.

"We believe further than the subcontractors who receive this added assurance of fair and equitable treatment will be more eager on their part to adhere to and cooperate in the ob-

servance of recognized ethical practices of the industry."

The program adopted by the national A.G.C. encourages chapters to meet with associations of subcontractors and to take such action as they deem most appropriate to improve bidding and awarding procedures and relationships within the industry.

Chapter Action Taken

A number of A.G.C. chapters already have adopted programs, or are in the process of doing so, by which they are demonstrating the desire of general contractors to abide by recognized ethics in the bidding and award of subcontracts, and are seeking cooperation of subcontractors in likewise abiding by ethical practices.

The A.G.C. program was adopted on the premise that problems of the industry can be solved most effectively by constructive action of leaders in the industry. As Mr. Wheeler stated to the A.G.C. convention:

"The A.G.C., members, and chapters during the past year have taken vigorous action in opposition to the proposed Federal Construction Contract Act (S. 848 and H. R. 1825) in the sincere and genuine belief that it is detrimental to the best interests of the construction industry, the government, and the public.

"But the passage, or rejection, of the legislation will not solve the problems of developing and maintaining cordial relationships between general contractors and subcontractors, or of securing more widespread observance of the recognized ethical practices of the industry by all those engaged in it in the bidding and award of subcontracts.

"Representatives of the association consistently have stated that these problems can be solved for all kinds of work more effectively and more satisfactorily within the industry than by the proposed legislation which applies directly only to federal public works.

"For these reasons the committee submits here recommendations for additional steps by which general contractors, and the A.G.C. locally and nationally, can voluntarily take constructive action to help improve, where necessary, the procedures for receipt of bids and award of subcontracts, and the relationships between general contractors and subcontractors.

". . . If experience demonstrates that the steps have been helpful, additional actions can be considered at a later time."

A.S.C.E.-A.G.C. Group Meets to View Problems

- Unionization of Engineers and Field Layout Work Studied

Members of the A.S.C.E.-A.G.C. Joint Cooperative Committee: Seated left to right) Maurice N. Quade; Howard G. Dixon; A. S. Horner, past president of A.G.C.; Charles B. Molineaux, co-chairman for A.S.C.E.; D. W. Winkelman, past president of A.G.C., co-chairman for A.G.C. (Standing left to right) A. N. Carter, A.G.C. National Staff, co-secretary for A.G.C.; Don P. Reynolds, co-secretary for A.S.C.E. Not shown in picture is Robert K. Lockwood.

» THE joint cooperative committee of the American Society of Civil Engineers and The Associated General Contractors of America met June 29 in New York City and discussed the problems created in some areas by unionization of professional engineers and the amount of field layout work contractors should undertake as part of their contracts.

A.G.C. representatives agreed to recommend that the national association study the possible adoption of the society's policy on union control of engineers which (1) favors collective bargaining by professional employees; (2) states that no professional employee should be forced to affiliate with, or become members of any bargaining group which includes nonprofessional employees; and (3) opposes professional employees being forced to join any organization as a condition of their employment.

A.G.C. members recommended that the A.S.C.E. work for the enforcement of existing laws which protect the status of engineers. It was also suggested that the society set up local organizations to handle this problem and that its members work to promote "equitable laws and professional attitudes."

In discussing field layouts, A.G.C. spokesmen agreed to include in the agenda of the joint committee's next meeting the proper role the contractor should play in providing this service on projects. The A.S.C.E.'s Committee on Professional Practice is also expected to study the question further.

The joint committee agreed to continue working for the increase of salaries and better working conditions for engineers.

It was stated that many A.G.C. chapters, to insure an adequate number of civil engineers, are providing scholarships for engineering students in many of the country's universities.

Other questions on education that were discussed included:

- Recommendation to A.S.C.E. that a study be made to determine if engineering schools in preparing their curricula consider sufficiently the needs of the employer.
- That the shortage of good science and mathematics teachers makes the engineer shortage worse.
- That the employment of professors and instructors in civil engineering during the summer months is one way to acquaint them with the needs of the employer.
- And, that the cooperation of A.G.C. chapters with A.S.C.E. student chapters at universities be continued.

A.G.C. representatives also requested that A.S.C.E. members review the association's *Suggested Guide to Bidding Procedure* for building construction with the hope that the A.S.C.E. will participate in the drafting of a similar Guide for engineering (highway and heavy) construction.

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FOR MOVING EARTH, ROCK, COAL AND ORE

GM GENERAL MOTORS

District Engineer Col. Henry L. Hille, in charge of constructing the dam, addresses safety award ceremonies.

Garrison Spillway Joint Venture Awarded A.G.C. Heavy Division 1953 Safety Plaque

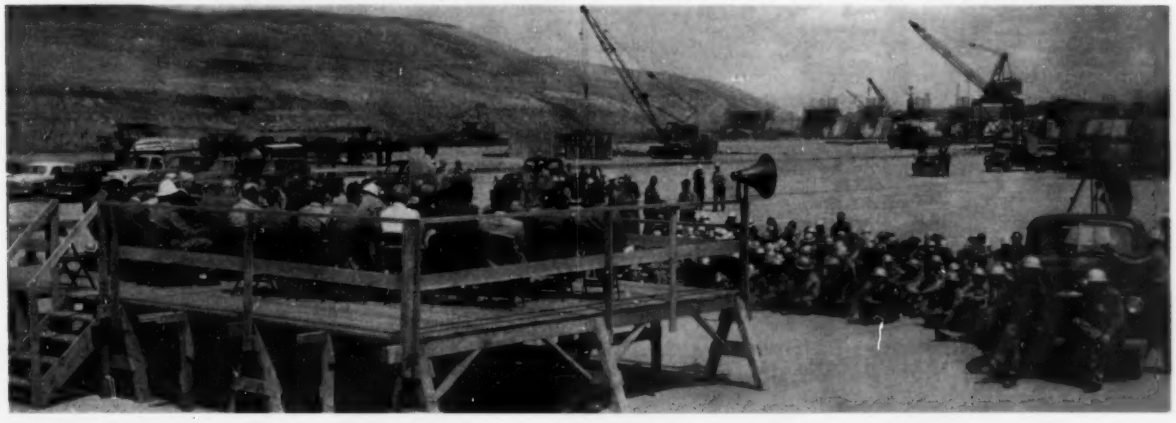
» IN SPECIAL ceremonies on the project's site at Riverdale, N. Dak., the Garrison (Dam) Spillway Constructors received the A.G.C.'s top safety award for heavy contractors who worked over one-half million man hours last year. The joint venture of five A.G.C. members had only three minor injuries during 1953.

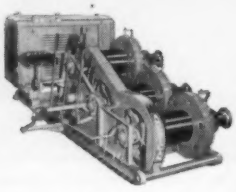
John B. Jardine, president of the A.G.C. of North Dakota, presented the safety plaque to J. M. Kellogg, project manager. "Safe Worker" buttons were distributed to those who helped establish the record.

Special guests attending the ceremonies were Brig. Gen. W. E. Potter, Omaha, division engineer; Col. Henry L. Hille, district engineer; Otis Bryant, representing Governor Norman Brunsdale; William Murrey, state A.F.L. president; and Charles Hoffman, North Dakota A.G.C. manager.

President Jardine, left, Mr. Kellogg, center, and Gen. Potter examine plaque.

View of ceremonies with specially constructed speakers' platform. Note men attending ceremonies, and project in background.





A new building system, plus modern, high-speed American equipment, have pared 10 months off construction time at the University Hospital of Portland, Oregon. Originally scheduled for completion late in 1955, the building's 1,200-ton structural steel framework is already completed.

The contractor followed the "Cofar" building system in which metal decking is welded to the steel frame and covered with lightweight concrete. Helping to speed the rate of construction and keep costs down is the highly-efficient American Model 75-B 3-drum Hoist.

With anti-friction bearings throughout, American Hoists not only speed the job by delivering more capacity loads per day, but they withstand longer, tougher usage. Years of experience are behind these famous hoists, built to satisfy the most exacting requirements of owner and operator alike.

American Hoists outsell all others simply because they do more work, with less maintenance, for a longer life span. Ask your distributor for details on the complete American Hoist line, *the line that leads the field!*

American Hoist

AMERICAN HOIST & DERRICK CO.

St. Paul 1, Minnesota

MANUFACTURERS OF:

Crawler & Truck Cranes · Steel Derricks · Crosby Blocks · Wire Rope Sheaves · Locomotive Cranes
Hoists · Portable Material Elevators · Genuine Crosby Clips · Revolver Cranes · Utility Hoists

Edward P. Palmer Dies Suddenly; Was President of A.G.C. in 1938

- Pioneered in Association's Labor Relations Work
- Former Chamber Official Noted in Heavy Field

» EDWARD P. PALMER, a veteran of 48 years in the construction industry, and 19th president of The Associated General Contractors of America in 1938, died suddenly July 12 at his home in Stamford, Conn.

Services and burial took place July 15 at Friends Meeting House, Purchase, N. Y. The national association was represented at the services by James D. Marshall, executive director, of Washington, D. C., and Richard Hopkins, Albany, N. Y.

On behalf of the association A.G.C. Managing Director H. E. Foreman stated, "He has made a lasting contribution to the construction industry and to The Associated General Contractors of America which he served so outstandingly as its president, and in other capacities for more than 20 years. His high character has lastingly benefited all of us."

Mr. Palmer was widely known for his activities in labor relations, in civic affairs, in the United States Chamber of Commerce, and for outstanding heavy construction projects performed by his firm, Senior & Palmer, of New York City.

Notable Heavy Projects

He was president of the firm which was formed in 1929.

Born in Chester County, Pa., in 1884, he was graduated from Swarthmore College in 1906 and started his career in the construction industry at once as an engineer for the Pennsylvania Railroad on construction, including Hell Gate Bridge. Later, he was employed by New York City as engineer on subway construction.

After four years as engineer superintendent on a project for the Rapid Transit Subway Construction Co. of New York, Mr. Palmer served as a captain in the Army Transportation Corps in France in 1918 and 1919.

From 1921 to 1929 he was secretary of Arthur McMullen Co., a New York firm which specialized in subway and bridge construction.

Among the Senior & Palmer firm's more prominent projects were bridges for the Pennsylvania Railroad and the New Jersey State Highway Department over the Passaic River, various pneumatic foundation jobs, and several projects on which it worked as co-contractor, including Pine Camp (now Camp Drum) near Watertown, N. Y.; the Naval Supply Depot, Scotia, N. Y.; Unionport Bridge, City of New York; and the New York Central Harlem River Bridge.

Mr. Palmer was active in The Associated General Contractors of America since his appointment to the Advisory Board in 1934, serving as chairman of the Finance Committee 1935 through 1937, A.G.C. vice president at large in 1936 and 1937, president in 1938, a member of the Labor Committee since 1939 and its chairman from 1939 through 1943, and a member of the Executive Committee from 1935 through 1943. He also had represented the A.G.C. on a foundations committee of the American Standards Association.

In work relating to the government, he was a member of the Contractors Code Authority in the days of the National Recovery Act in 1934-35, and in 1939 he was a member of a committee advising the Army and Navy Munitions Board on construction in the preparedness program.

In 1939 Mr. Palmer became a director of the United States Chamber of Commerce, and from that time until 1945 was chairman of the Chamber's Construction and Civic Development Department Committee.

Active in Labor Field

Mr. Palmer had been very active in the field of labor relations since his appointment to the A.G.C. Labor Committee in 1939, a post he held until his death. He was the first chairman of the committee.

In 1945 he was an official delegate to the President's National Labor-Management Conference held in Washington, the only official delegate from the construction industry.

In 1946 he was one of the two United States employer delegates to the conference on Building and Public Works Construction called in Brussels by the International Labor Organization which was organized under the old League of Nations and continued under the United Nations.

Mr. Palmer also was one of the first trustees of the National Joint Board for the Settlement of Jurisdictional Disputes in the Building and Construction Industry, an organization created in 1948 and operated by the A.G.C., other employer groups in the industry, and building trades unions of the American Federation of Labor's Building and Construction Trades Department.

Received Moles' Award

A member of The Moles, a New York society of men engaged in the construction of tunnels, subways, foundations and other heavy construction, Mr. Palmer received that organization's 1953 award for "outstanding achievement in construction."

He was a member of the American Society of Civil Engineers and the New York Engineers' Club; was a member of the Swarthmore College Board of Managers for five years, and for 15 years was member of the Board of Trustees of Seabury Memorial Home, Mount Vernon, N. Y. He was secretary and treasurer of the Transportation Corps, A.E.F. Association, and a member of the Delta Upsilon Fraternity.

Surviving are his daughter, Mrs. Albert J. Bergfield, and three grandchildren, all of Stamford, Conn., and a sister, Mrs. Ida P. Stabler, of Swarthmore, Pa. He was the son of Dr. Edward L. Palmer, a country physician who served in the Civil War, and Ellen Pannock Palmer.

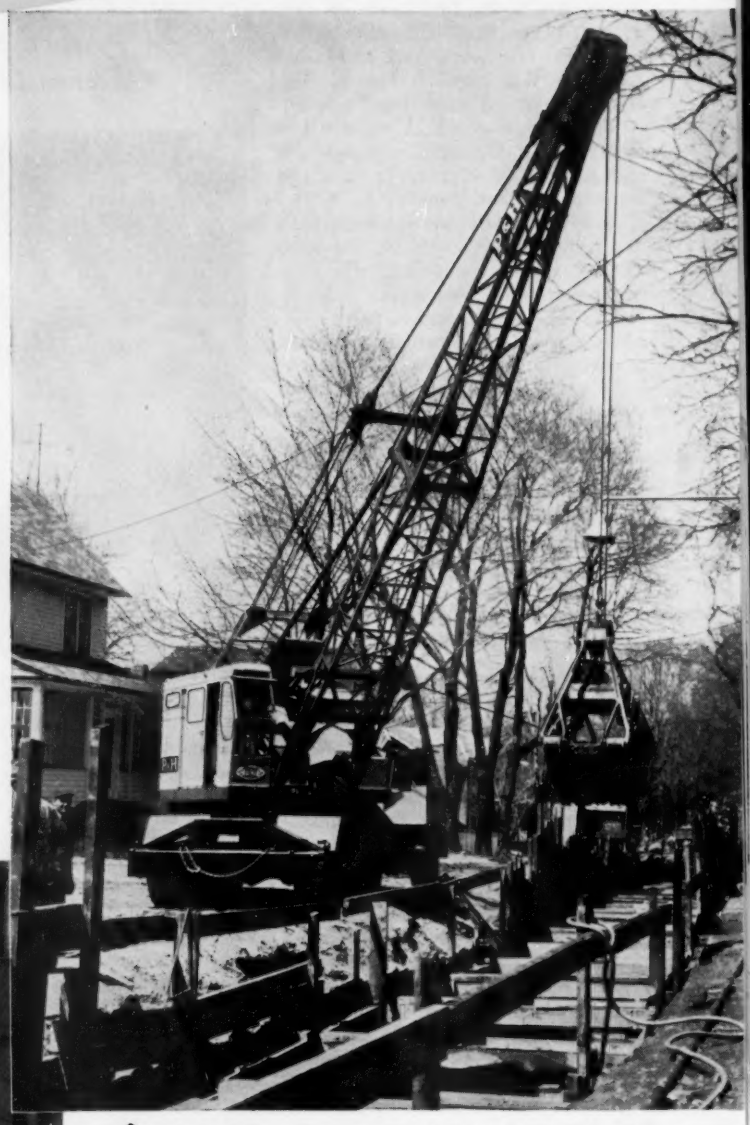
Put a P&H where the problems are . . .

Stronger . . . More Stable 555A TC

with the precision response of low-pressure hydraulic control!

Fast-moving mobility plus greater stability give P&H Truck Cranes a big edge over ordinary machines. That's why you find so many big contractors depending on P&H Truck Cranes exclusively. They not only handle the run-of-the-mill jobs economically . . . they also take on the big boom lifts, and the special jobs that call for extreme precision.

The difference is obvious when you start to compare. P&H Truck Cranes are modern in every detail . . . all-welded throughout . . . better balanced, easier to handle on road and job. There are many other P&H refinements that keep you working steadily at lower cost . . . *live roller* circle, torsion-bar mounted front axles, triple-safe boom hoist, to name a few. *Remote control available.* Best of all you can afford a modern P&H Truck Crane. Sizes from 7- to 35-ton capacity.



P&H 555A TC with clamshell attachment on sewer job. Owned by R. Tomasetti, Brooklyn, N. Y.

Here's how A. Catapano of Glendale, N. Y. gets sewer jobs done fast with a P&H 555A TC clamshell.

P&H 555A TC owned by Hendrickson Bros., Valley Stream, N. Y., handling 1½-yd. concrete bucket on a 60-ft. boom.

P&H TRUCK CRANES

HARNISCHFEGER CORPORATION

MILWAUKEE 46, WISCONSIN

See your P&H dealer... NOW!

the P&H Line

Three New Fla. Building Groups Will Give A.G.C. 124 Chapters

• Charters to Be Presented at Separate Ceremonies

» THE Associated General Contractors of America will have increased its chapter membership to 124 when it charters three new building chapters in Florida this month.

A.G.C. President John MacLeod and Managing Director H. E. Foreman were expected to sign charters for the Tallahassee Chapter and the Florida Gulf Coast Chapter (Panama City) on August 10. A charter for the newly organized Central Florida Chapter (Orlando) is expected to be signed later this month. Charter presentations will be made at special ceremonies to be announced later.

The Tallahassee and the Gulf Coast Chapters have been receiving routine services from the national A.G.C. office since late last month.

Officers of the Gulf Coast Chapter are as follows: H. R. Eaton, Eaton and Elzea Construction Co., president; K. E. Padgett, Padgett Construction Co., vice president; and J. W. Elzea, of the Eaton and Elzea firm, secretary-treasurer. The chapter has jurisdiction over construction in Walton, Bay, Holmer, Gulf, Washington, Calhoun, and Jackson Counties, all formerly part of the territory of the Northwest Florida Coast Chapter (Pensacola).

Donald K. Albritton, Albritton-Williams, Inc., Tallahassee, is secretary-treasurer of the new Tallahassee Chapter. The chapter will have jurisdiction over the territory bounded by the Georgia state line on the north, the Suwannee River on the east, the Gulf of Mexico on the south and the Apalachicola River on the west. This territory has never been assigned to any A.G.C. chapter before.

Members of the Gulf Coast Chapter are the Brewton Engineering Co., Panama City; Caswell Construction Co., DeFuniak Springs; Eaton and Elzea Construction Co., Inc., Fleming Construction Co., J. W. Giles Construction Co., all of Panama City; E. F. Gunn Construction Co., Port St. Joe; H. G. Harders and Son, Inc., and A. A. Holmes Construction Co., of Panama City; Ralph E. Neel, general contractor, Bonifay; and the Padgett Construction Co., Panama City.

Tallahassee Chapter members include Albritton-Williams, Inc., Tallahassee; Albritton-Williams of Quincy, Quincy; Bear Construction Co., Inc.; J. O. Carlile, general contractor; Jack Culpepper, general contractor; Paul Smith Construction Co.; and the Winchester Construction Co., all of Tallahassee; H & H Construction and Supply Co., Thomasville, Ga.; and Bruce Bowen, Inc., Quincy.

The territory of the Central Florida Chapter will include Lake, Sumter, Orange and Osceola Counties. Officers of the group elected at a recent organizational meeting are: Frank M. Hubbard, Hubbard Construction Co., president; J. Hilbert Sapp, J. Hilbert Sapp, Inc., vice president; and Grover J. Carter, Paul Smith Construction Co., secretary-treasurer; and Directors H. J. High, H. J. High Construction Co., and John F. Stimpson, Bumby and Stimpson, Inc., all of Orlando.

The first 13 firms to apply for membership in the Central Florida Chapter are: Bumby and Stimpson, Inc.; H. J. High Construction Co.; Hubbard Construction Co.; Jarco Corporation; Langston Construction Co.; Mann Construction Co.; C. A. Meyer, general contractor; Rainer and Cambron; Saine Co., Inc.; J. Hilbert Sapp, Inc.; and Paul Smith Construction Co., all of Orlando; and Gregg, Gibson and Gregg, and J. D. Manly Construction Co., Leesburg.

Holmes, Former Secretary, Dies

Carl Oliver Holmes, former executive secretary of the Indiana General Contractors Association died in June in Indianapolis, Ind.

Mr. Holmes served for 12 years as executive secretary of the Indiana chapter. Also he was very actively engaged in political and civic life. From 1920 to 1923 he represented Lake County in the Indiana Senate on the Republican ticket. For varying numbers of years Mr. Holmes was president of the Indiana Church Federation, the Indiana Bankers Association, the Indiana Mental Hygiene Association, and the Indianapolis Community Relations Council.

The funeral was held in the Broadway Methodist Church, Indianapolis, Ind. Mr. Holmes was a member of that church.

The deceased is survived by his wife; a daughter and grandson; two brothers; four sisters; and 12 nieces and nephews.

N. K. Dickerson, Sr., 60

Norvin Kennedy Dickerson, Sr., 60, chairman of the board of Dickerson, Inc. died June 14 in Monroe, N. C.

A pioneer roadbuilder in the Southeast, Mr. Dickerson was a native of Louisville, Ky. He moved to Monroe, N. C. in 1931 where he was an officer of R. B. Tyler Construction Co., in charge of many road building projects.

In 1943 Mr. Dickerson and his oldest son, N. K. Dickerson, Jr., along with several others organized Dickerson, Inc.

Mr. Dickerson was a member of the First Presbyterian Church, the Lions Club and many other civic and business organizations.

He is survived by his wife, the former Miss Clara Mertenkate; four sons, N. K. Dickerson, Jr., John Dickerson, Dr. A. J. Dickerson, and William B. Dickerson; his father, Edward R. Dickerson; a brother, G. R. Dickerson, and 11 grandchildren.

William F. Trimble, Jr., 61

William F. Trimble, Jr., 61, president of The Trimble Co., Pittsburgh, Pa. died June 18.

Mr. Trimble was a director and treasurer of the Master Builders' Association of Allegheny County (A.G.C.) and a past president of the Pittsburgh Builders' Exchange. The Trimble Co. which he headed since 1937 has been active in the building of Pittsburgh since the pre-Civil War days.

The deceased president graduated in 1916 from the University of Pittsburgh. He took part in many civic activities and was a director or officer in numerous local business organizations.

Mr. Trimble is survived by his wife, Mrs. Lois G. Trimble; two sons, William F. III, and Anthony H. Trimble; a sister, Mrs. Eleanor Peel; a brother, Lee Trimble; and three grandchildren.

A.G.C. of Western Kentucky Dedicates New Office and Plans Room

New home of the A.G.C. of Western Kentucky was built by labor and materials donated by members.

» THE A.G.C. of Western Kentucky, Paducah, chartered July 16, 1953, moved into its new home on its first anniversary last month.

Taking part in the day-long dedication ceremonies was Paducah's Mayor Robert Cherry who praised the A.G.C. chapter for its part in settling many of the labor problems that plagued the area's construction industry last year.

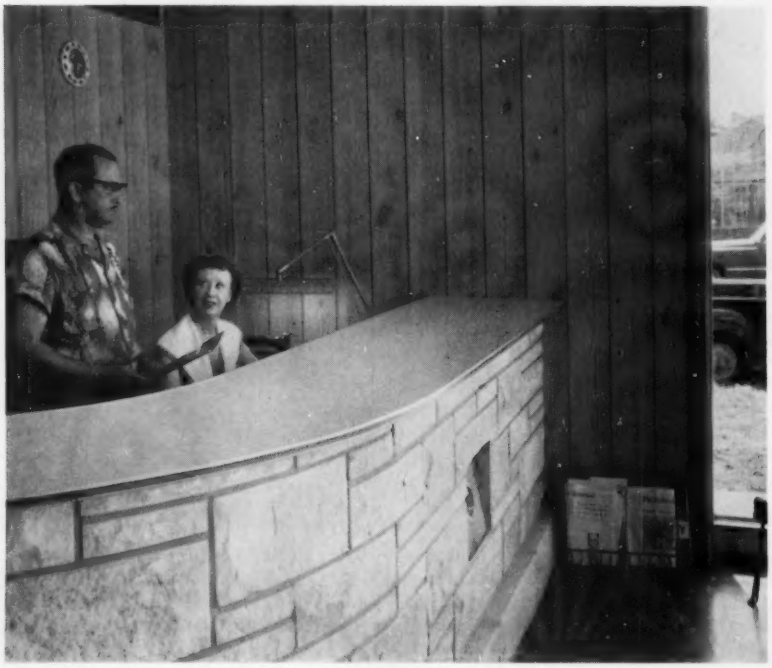
Harold Gangnath, secretary-manager of the chapter, said at the dedication that the group is now composed of 130 members and associate members who are "justly proud" of the progress of their association in its first year of existence.

"The new office and plans room, an ultra-modern building in every respect, is structural proof of the faith these 130 individuals, firms, and organizations have in the growth and stability of the general construction industry in this area," he added.

W. A. Snow, A.G.C. national staff, attended the ceremonies and complimented the chapter on its new office.

John P. Kerr, Cassidy Construction Co., Paducah, is president and Edgar Stevens, Edgar Stevens Construction Co., Cairo, Ill., is vice president.

In photo at lower left John P. Kerr, chapter president, is shown behind reception room counter with Mrs. Thelma C. Pryor, assistant secretary of the chapter. Lower right, Harold Gangnath, secretary-manager, works at his desk.



STANDARD FORMS

COVERING IMPORTANT CONTRACTING PROCEDURE

Prepared by The Associated General Contractors of America and Cooperating Bodies

Order No.	MANUALS	Per Copy	Per Dozen	Per 100
1.	A.G.C. Manual ..... (Contains documents listed below: Nos. 3-30, inclusive, and Nos. 34, 35, 36, 36a, 37, 38).	$5.00	$50.00	———
2.	Accident Prevention Manual (Revised and enlarged 1952) ..... (Pocket-sized sectional reprints available. Information on request.)	3.00	30.00	$210.00
	CONTRACTS			
3.	Suggested Form of Contract, Engineering Construction Projects, prepared by A.S.C.E. and A.G.C., 1953 edition.....	.25	2.75	20.00
4.	Standard Building Contract of the American Institute of Architects—Revised 6th Edition	.50		47.50
5.	Subcontract form—American Institute of Architects—Revised 6th Edition.....	.10		9.50
6.	Standard Form of Acceptance of Subcontractor's Proposal	.10		9.50
7.	Standard Government Contract.....	.01		
8.	A.G.C. Cost Plus a Fee Contract.....	.10	.50	2.50
9.	A.I.A. Cost Plus a Fee Agreement between Contractor and Owner—Revised 6th Edition	.10		
11.	Equipment Rental Agreement.....	.10	.50	3.00
12.	A.G.C. Proposal Form.....	.10	.50	3.00
	ESTIMATING AND ACCOUNTING			
13.	A.I.A. Accounting Form #701 "Change Order"	.20	1.80	12.00
14.	A.I.A. Accounting Form #702 "Request for Partial Payment".....	.20	1.80	12.00
15.	A.I.A. Accounting Form #703 "Certificate for Payment"	.20	1.80	12.00
16.	Building Estimate Summary.....	.10	.50	3.00
17.	Job Overhead Summary.....	.10	.50	3.00
20.	Contractors' Equipment Ownership Expense (Itemized tables of ownership expense elements with instructions for application. Revised 1949)	1.00	10.00	65.00
21.	Equipment Record—Bond paper.....	.10	.50	3.00
22.	Equipment Record—Cardboard	.10	.50	3.50
	INVESTIGATION OF BIDDERS			
24.	Standard Pre-Qualification Questionnaires and Financial Statements for Prospective Bidders—Complete in Cover. Engineering Construction (For Qualifying Before Bidding).....	.20	1.80	12.00
25.	Standard Pre-Qualification Questionnaires and Financial Statements for Prospective Bidders—Complete in Cover. Building Construction (For Qualifying Before Bidding)	$ .20	$1.80	$12.00
26.	Standard Questionnaires and Financial Statement for Bidders—Complete in Cover. Engineering Construction (For Qualifying After Bidding)	.20	1.80	12.00
27.	Standard Questionnaires and Financial Statement for Bidders—Complete in Cover. Building Construction (For Qualifying After Bidding)	.20	1.80	12.00
28.	Financial Statement and Questionnaire for Credit Transactions	.20	1.80	12.00
	MISCELLANEOUS			
29.	Insurance Check List.....	.10	1.00	5.00
30.	The Functions of a General Contractor...	.10	.75	6.00
34.	A.G.C. Governing Provisions.....	.10	.50	3.00
35.	A.G.C. Code of Ethical Conduct.....	.10	.50	3.00
36.	Concrete Mixer Standards.....	Single copies—no charge; quantity prices on application.		
36a.	Contractors' Pump Standards.....			
37.	A.I.A. Standard Form of Arbitration Procedure			
38.	Suggested Guide to Bidding Procedure....			

FOR A.G.C. MEMBERS ONLY

A.G.C. EMBLEM

List of Styles and Prices on request.

SIGNS AND SEALS

39.	A.G.C. Cardboard Seal (red and black) 24" dia.	.50
40.	A.G.C. Metal Seal (red and black) 10" dia.	.40
41.	A.G.C. Decalcomania Seal (red and black)	
	a. 10" dia.	.20
	b. 5" dia.	.10

Metal Seals and Decals: 20% discount for orders of more than 50; 40% discount for orders of 200 or more.

43. A.G.C. SOCIAL SECURITY FORMS

Form SS1: Application for Employment; Form SS2: Employees' History Record; Form SS3: Employees' Employment and Earnings; Form SS4: Payroll. List of prices and styles will be furnished to A.G.C. members on request.

USE THE CONVENIENT COUPON TO PLACE YOUR ORDER

Order No.	Amount	Cost
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41b.		

43. Price List and Samples ☐

Price List and Styles of Emblem ☐

TOTAL COST .....

Make Checks payable to CONSTRUCTION FOUNDATION, A.G.C., Munsey Building, Washington 4, D. C.

Gentlemen: Enclosed find check for $..... for which please send materials as ordered by number herewith.

Name..... *Address*.....

City..... *Zone*..... *State*.....

Aug. 1954

Bituminous Paver-Finisher—*Foote Construction Equipment Division, Blaw-Knox Co., Nunda, N. Y.* Entire machine is mounted on rubber, 3 solid tires on each of 2 front hydraulically controlled steering wheels, and heavy, mid-section-mounted, pneumatic-tired traction wheels, 2 to a side. Use of rubber for traction prevents spin, weaving or side-slip in making turns and other steering operations. Brakes are provided on each side of rear wheels to aid in steering when turning in small radius. Machine has 19′5″ wheelbase, 4-cu. yd. receiving hopper, floating-type screed and vibrating tampers. Controls are dual, in reach of operator from either side of machine. Most are hydraulic, except that manually operated calibrated controls, located near operator, are used to regulate, through adjusting screws, desired depth of material. Courses can be laid in widths from 8′ to 13′ and in depth from 0″ to 10″. Chain-driven bar-type conveyers, located in base of receiving hopper and operated separately or in unison, move material through hopper and discharge it ahead of screed. Flow control is provided through gates near discharge end of hopper. Angle of floating screed can be changed by manually operated "index wheels" located on each side of machine. Two tamper bars are located just ahead of leveling screed. Blower-type screed heater extends full width of screed box and provides even heat. First on-job performance of machine took place in May on Pennsylvania Legislative Route 802-Sec. 3. General contractor was Harrison Construction Co., Pittsburgh, A.G.C.

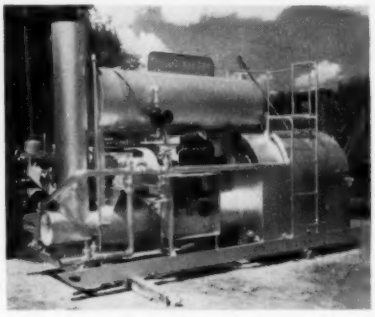
Blaw-Knox bituminous paver-finisher

Portable Ventilator—*Mine Safety Appliance Co., 201 N. Braddock Ave., Pittsburgh 8.* Two-way ventilating system can be used as blower or as exhauster. It may be used with or without accompanying collapsible air duct. It is driven by 3,450 r.p.m. explosion-proof electric motor capable of moving approximately 3,000 cu. ft. of air per minute. Ventilator is supplied with 15′ of 3-wire electrical cable and 15′ length of 14″ diameter duct and 2 carrying belts.

Crane-Excavator—*Bucyrus-Erie Co., South Milwaukee, Wis.* New 15-B transit crane is mobile crane-excavator with 15-ton rated lifting capacity. Wheel mounting is manufactured exclusively for Bucyrus-Erie by White-Sterling and built especially for crane-excavator service. Mounting is powered by 138 h.p. White gasoline engine, equipped with single wheels in front and tandem duals in rear with 170″ wheelbase. Heavy-duty 5-speed transmission mounted in unit with engine and 2-speed auxiliary unit mounted in truck frame combine to provide 10 forward speeds to maximum of 31 m.p.h. and 2 reverse speeds. Standard equipment includes front and rear manually controlled telescoping outriggers. Standard crane boom is 30′ long, extendible to 70′ by using removable inserts. Boom suspension is of pendant type. Boom lowering is power-controlled. Safety feature is friction swing brake (in addition to regular swing lock). It is outside band brake fitting left rear swing clutch housing. It is controlled from operator's station by hand lever equipped with ratchet squeeze lock for "hold" service. Upper works and machinery arrangement is basically same as 15-B crawler-mounted machine. Revolving frame is one-piece welded unit of deep box-section design, extending full length of machine. Crane is convertible to ½-cu. yd. shovel, dragshovel, clamshell and dragline front ends.

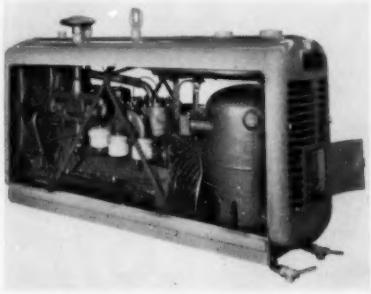
Bucyrus-Erie 15-ton transit crane

Materials Heater—*W. L. Childers Manufacturing Co., 605 Euclid Ave. N.W., Albuquerque, N. Mex.* Automatic hot oil circulating heater for heating heavy fluids and asphaltic materials in storage tanks, tank cars, asphalt plants, etc., obtains 80% efficiency through use of patented combustion chamber and heating tube. It is produced in 4 models for different applications. It is completely automatic in operation, eliminating need of night watchman and other labor. Burners can be provided for any type of gas or liquid fuel.



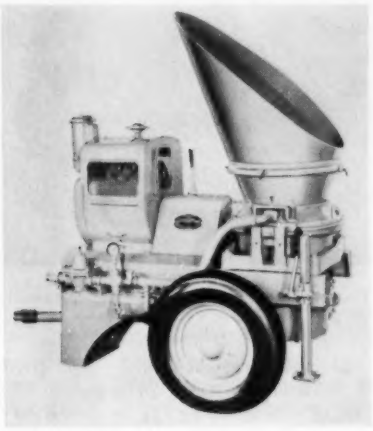
Childers automatic hot oil circulating heater

Compressor—*Le Roi Co., 1706 S. 68th St., Milwaukee 14.* "Utility" 105 c.f.m. compressor has been returned to "Airmaster" line. It features better air cleaning and cooling through use of oil bath air cleaners and pressurized cooling system. Same basic engine is used as in 105 portable. It is built up under one housing including upright air receiver. It can be mounted crosswise behind truck cab, allowing extra room for other equipment and materials. Its over-all width is 25″ and over-all length is 82″. Strong lifting eye in center of hood top makes it easy to move from level to level on erecting job.



Le Roi "Utility" compressor

Grout Mixer—*Construction Machinery Sales Co., Waterloo, Iowa.* Model 240 "Jetcreter" is built in air- or water-cooled engine models or with electric motor. Water-cooled machine has electric starting, 134 cu. in. valve-in-head Ford radiator-cooled engine and multi-speed transmission. Air-cooled model is powered by Wisconsin air-cooled engine, has manual starting and is available with or without multi-speed transmission. "Jetcreter" is designed for operation with independent source of air. It features C.M.C. "air lock" principle that makes possible continuous feeding.



Construction Machinery 240 "Jetcreter"

Truck Bodies—*Hercules Steel Products Corp., Galion, Ohio.* New 4-series line of contractors' bodies includes Series LD and WD rugged-duty bodies (standard lengths 12′ to 17′), Series CD all-purpose bodies (standard lengths 10′, 11′, 12′), Series D standard bodies (standard lengths 8′, 9′, 10′) and Series PL solid steel platform bodies for 60″, 72″, 84″, 102″ cab to axle trucks. They are available in each line for use with under-body and telescopic hoists. Load-carrier cab shields are available on Series LD, WD and CD.

Scrapers — *Wooldridge Manufacturing Co., Sunnyvale, Calif.* New line of 4 open-bowl tractor-drawn scrapers provide heaped capacity range from 10.5 to 25.0 cu. yd. They feature low center of gravity, high ground clearance, wide apron opening, "boiling bowl" loading principle and positive full power forward pivot-tilt ejection. Model OS80, with capacities of 10.5 cu. yd. heaped and 8.4 cu. yd. struck and OS-90, 15.0 cu. yd. heaped and 12.2 cu. yd. struck, are completely new. Model OS-152, introduced early in 1953, is now rated at 18.0 cu. yd. heaped and 15.1 struck. OS-200 has heaped capacity of 25.0 cu. yd. and struck of 20.0 cu. yd.

Steam Cleaners—*Homestead Valve Manufacturing Co., Coraopolis, Pa.* Series 3000 "Hypressure Jenny" steam cleaners feature single heating coil with oil-fired burner and volume to supply 4 cleaning guns. Available in trailer-mounted type, or as shop portable or stationary units, cleaners may be had with electric motor or gasoline engine drive. Automatic electric ignition starts unit which delivers cleaning blast of 300 gal. per hour within 3 minutes from cold start, or 100 gal. per hour if unit is used for heat transfer purposes.

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4-CYCLE
AIR-COOLED

K90

K160

K90 3.6 H.P.
K160 6.6 H.P.
K330 11.8 H.P.
K660 26.8 H.P.

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K330

K660

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Established 1873

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PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS
AIR-COOLED ENGINES • PRECISION CONTROLS

Trencher—*The Cleveland Trencher Co., 20100 St. Clair Ave., Cleveland 17.* Model 240 is heavy-duty trenching machine for pipelines and similar heavy construction jobs. It is crawler-mounted wheel-type trencher which digs up to 36″ wide and down to 6′3″ deep. It has ground bearing pressure of 6.3 lb. per sq. in. Non-packing crawlers are anti-friction bearing equipped. Digging wheel employs front upper truck as well as rear upper truck. Additional truck is 3″ in diameter, mounted on self-aligning bearings and supports digging wheel entirely independently of driving sprockets. Feature is crawler "kick-out" clutch which permits stopping crawlers without halting digging wheel's operation. Three bucket sizes give 240 trench width range from 20″ to 36″. Reversible conveyer, 30″ wide, discharges spoil on either side of trench. Over-all length of machine is 24½′ and road width is 8′. It is powered by 460 cu. in. diesel engine delivering 65 h.p. at 1,200 r.p.m. Fifteen large capacity buckets are mounted on digging wheel in 3 different series of bucket tooth patterns.

Cleveland 240 trencher

Tractors—*Caterpillar Tractor Co., Peoria 8, Ill.* New heavy-duty track roller frames and special large front idlers are now being supplied for 44″ gage D4 track-type tractor. Track roller frames are similar to standard 4-roller frames but are built of box section with replaceable wear strips for front idler hold-down bearings. All-weather direct electric starting with newly developed glow plugs is now available for D4. . . . New 98-gal. fuel tank is now being installed as standard equipment on D8 track-type tractor. Double grouser track shoes are now available for D8. They are designed for use on rock and other hard surfaces which cause heavy wear on track shoes.

Earthmover Tire—*Goodyear Tire & Rubber Co., Akron 16, Ohio.* Low-pressure tire is constructed for wider rim than present earthmover tires. It is called "Wide Base Earth Mover." At present it is made in 2 sizes—29.5 x 25 and 29.5. x 29 and replaces 24.00—25 and 24.00—29 sizes. It is mounted on rim 25″ wide. It is available in "Earth Mover Sure Grip" and "Hard Rock Lug" tread designs.

Goodyear earthmover tire being tested

Shovel—*Harnischfeger Corp., 4603 W. National Ave., Milwaukee 46.* Model 155 is ½ cu. yd. crawler machine. Power box, which contains all driving machinery, is built of inch-thick steel plate, all-welded into rigid unit. Oil-tight power box forms machine frame and supports all shafts, drums, engine, counterweight and work attachments. Model 155 is fully convertible as shovel, hoe, clamshell, dragline, crane and magnet. Planetary boom hoist has power lowering. Machine is hydraulically controlled. Power may be gasoline or diesel.

Harnischfeger Model 155

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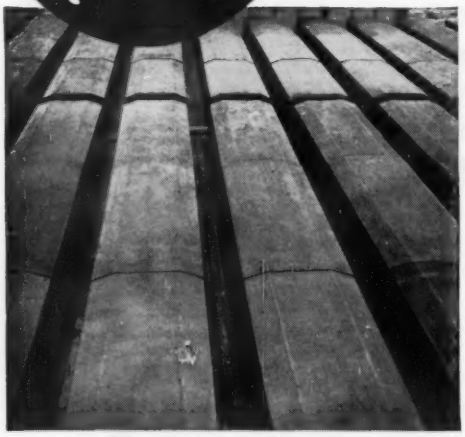

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The problem of overcoming water-bearing sands beneath the eastern end of the twin bridges spanning the Cuyahoga River near Brecksville on the Ohio Turnpike is being solved through drilling of 100 vertical relief wells. The wells will permit underground water to escape to the surface by natural underground pressure. It was not until the densely wooded area had been cleared that it became apparent that the slope on which the roadway will be built had failed in many places during the past 50 years.

Deep borings made with Salem Tool Co.'s vertical truck-mounted McCarthy drill were sunk at critical points. Bores were from 35 to 40 feet deep and eight inches in diameter. Perforated pipe sections were sunk by McCarthy drill.

As a result of the test borings it was decided to locate the turnpike about halfway up the slope. In the upper half of the hillside, along the north right of way, a large ditch will be excavated. This will remove the deadweight of the upper slope pressing down on the roadway section, which in turn weighs down on the lower slope.

After the relief wells have been drilled, a considerable portion of the slope will be blanketed with six feet of crushed rock. In this rock blanket will be a drainage system of perforated pipes. The drainage system, plus the wells, will prevent saturation of the embankment.

Contractor for this section of the turnpike is the Western Contracting Corp., Sioux City, Iowa, A.G.C.

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Construction of slab showing SONOVOIDS —Windsor, Conn. High School, A. J. Macchi, Structural Engineer, designer, A. E. Stevens Co., contractors.

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Excavators—*Thew Shovel Co., Lorain, Ohio.* Lorain "42" series of "Moto-Crane," "MotoShovel," "Moto-Hoe," "Moto-Clamshell" and "Moto-Dragline" are presented in catalog. Design features of turntables, carrier and self-propelled carrier are highlighted. Section is devoted to crane boom and its equipment, including views and descriptions of power load-lowering device, boom-lowering device, third drum, 3-sheave boom head. Many on-job action pictures are included.

Trencher—*Parsons Co., Newton, Iowa.* Catalog presents Model 88 "Trenchmobile." It is illustrated with many photos showing machine, its operating parts and performance on job.

Grader Operation—*The Galion Iron Works & Mfg. Co., Galion, Ohio.* Booklet shows in cartoon style how to operate motor grader. Some of subjects covered are hydraulic control system, steering, tips on leaning front wheels, proper positioning of blade, moldboard pitch adjustments, reverse blading, bank sloping, ditching, road maintenance, turning grader, correct use of gear speeds, snow removal.

Expansion Joint—*Owens-Corning Fiberglas Corp., Toledo 1, Ohio.* Bulletin describes physical make-up and applications of Fiberglas expansion joint. It contains information on expansion joint applications on highway, street, sidewalk, parking area, driveway, airport and bridge projects. Weight tables, widths and thicknesses are included.

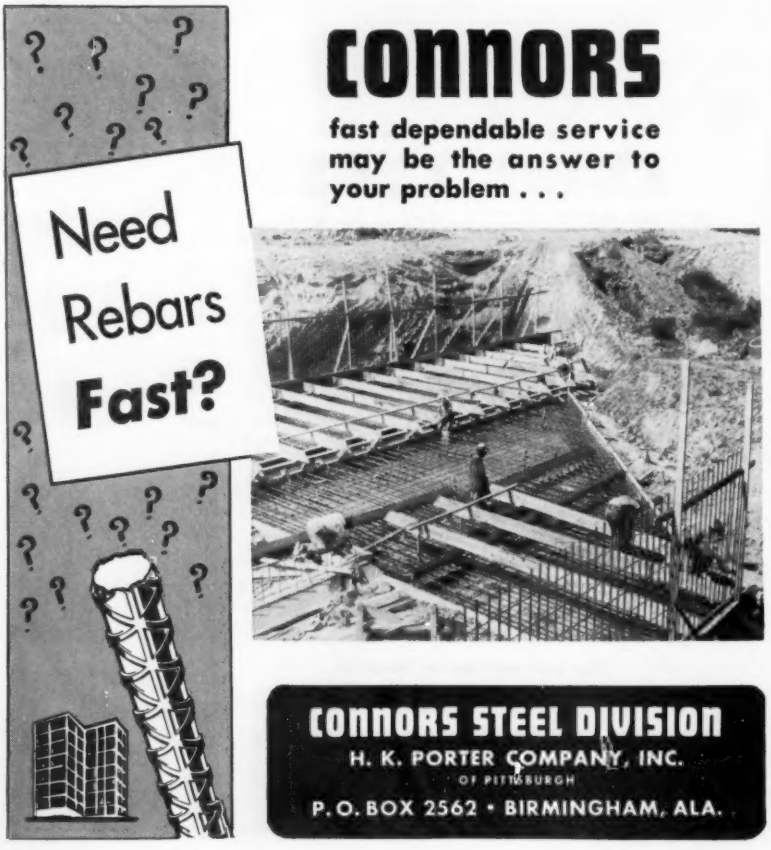
Shovels—*Schield Bantam Co., Waverly, Iowa.* Two specification bulletins present Models T-35, 3/8-yd., 6-ton truck-mounted shovel attachment and C-35 3/8-yd. crawler-mounted shovel-crane. Specifications, capacities, information about optional shovel equipment are given.

Tractors, Scrapers, Attachments—*International Harvester Co., 180 N. Michigan Ave., Chicago 1.* Complete line of International industrial power products, 73 in all, is described in new catalog. Described are crawler tractors, rubber-tired tractors, scrapers, bulldozers, bullgraders and angle bulldozers, allied equipment, such as Drott skid-shovels and Superior sidebooms, wheel tractors for industrial use and diesel, gasoline and gas power units.

Drill—*Ingersoll-Rand Co., 11 Broadway, New York 4.* QM-2 "Quarrymaster," dual-purpose blast hole drill for either rotary or percussion drilling, is presented in Form 4153. Features and uses as percussion and rotary drill are presented. On-job pictures are included, dimensions and specifications are given and accessories listed.

Tractors—*Allis-Chalmers Tractor Division, Milwaukee 1.* Diesel-powered crawler tractor line is pictured and described in booklet, *Facts . . . on a New Breed of Tractors.* It presents operational methods and specific feature advantages of 4 crawlers in A-C line. Action photos show crawlers at work. Review of crawler tractor progress in past 100 years is included. Specifications of each tractor are listed.

Diesel Engines—*Caterpillar Tractor Co., Peoria 8, Ill.* Diesel engine applications are described in booklet, *Cat Diesel Engines Plus Hydraulic Torque Converters* (Form D457). Job descriptions and photos show applications where torque-converter-equipped diesel engines have proved themselves profitable. Included are descriptions of installations in locomotive cranes, drilling rigs and shovels. Chart of diesel engines and their h.p. ratings is included.



BOOK REVIEW

How to Operate Excavation Equipment, by Herbert L. Nichols, Jr. North Castle Books, 212 Bedford Road, Greenwich, Conn. $1.50.

This is a textbook for instruction of operators of excavating equipment. It covers revolving shovels, conveyer machinery, tractors and dozers, tractor-loaders, hauling units, graders and rollers and other work.

Book gives valuable points about care of equipment, how to keep it in condition and how to place it on a job so it will perform with maximum efficiency.

Illustrations are very good, with diagrammatic drawings showing details of machines and their operation.

MANUFACTURERS' NOTES

William Blackie has been elected executive vice president of CATERPILLAR TRACTOR Co.

MARION POWER SHOVEL Co. has acquired controlling interest in THE OSGOOD Co. and the latter's wholly owned subsidiaries, The General Excavator Co. and The Commercial Steel Castings Co.

Emory M. Heuston, for 25 years with the advertising department of BUCYRUS-ERIE Co., during the past 9 years as manager, has joined the Richard T. Brandt, Inc., advertising agency. Martin B. Jaeger succeeds him.

George L. Staudt, advertising manager of HARNISCHFEGER CORP., has been elected chairman of the board of the National Industrial Advertisers Assn.

MANITOWOC ENGINEERING CORP. has appointed Mel R. Stumm to the newly created position of advertising manager.

Edward D. Depew, assistant secretary of UNIVERSAL ATLAS CEMENT Co., has been elected secretary and appointed general attorney.

Donald E. Hawkins has been elected president of BAY CITY SHOVELS, INC., succeeding Morgan Ramsay, who has retired due to ill health.

Otto A. Krueger has been appointed manager of the industrial engineering and construction department of INTERNATIONAL HARVESTER Co., succeeding J. R. Allan, who has retired.

G. J. Morgan has been appointed vice president-assistant to the chairman of the board of UNITED STATES GYPSUM Co.

L. P. Galway has been appointed engineer in the technical service department of the ZONOLITE Co.

Dr. R. P. Dinsmore, vice president in charge of research and development for THE GOODYEAR TIRE & RUBBER Co., received a 40-year service pin at ceremonies in Akron July 6.

Harry L. White has been appointed sales manager of the AUTOCAR DIVISION of THE WHITE MOTOR Co.

Obituary

Leslie H. Garlinghouse, 66, cofounder and partner of Gar-Bro Manufacturing Co., died June 26 after a long illness.

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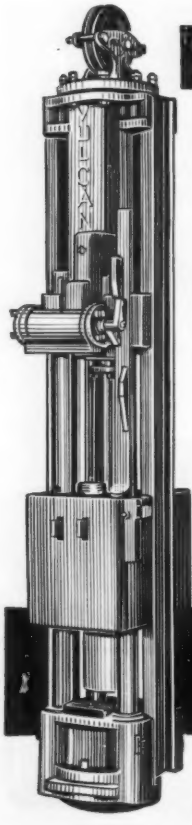

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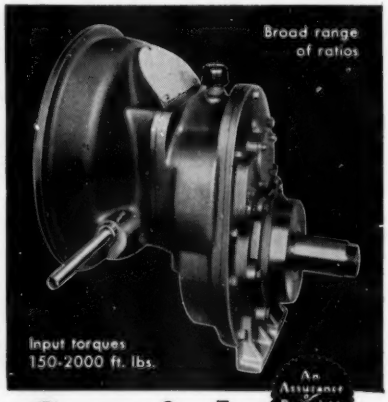

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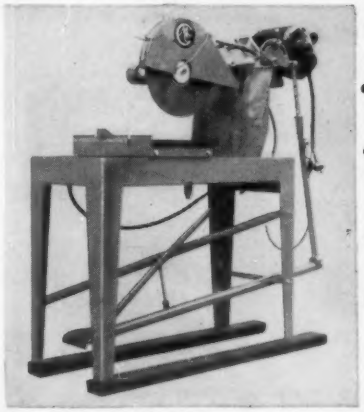

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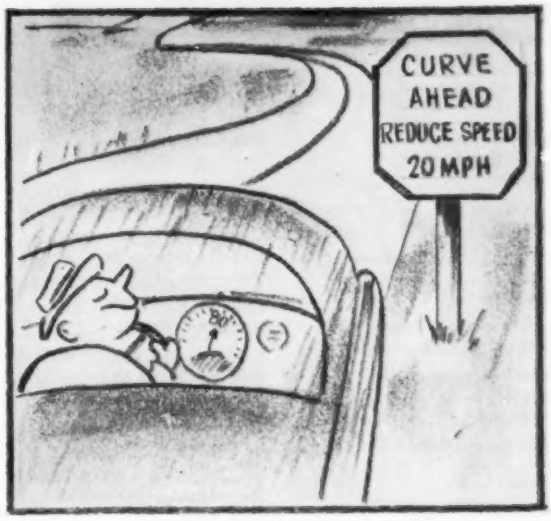

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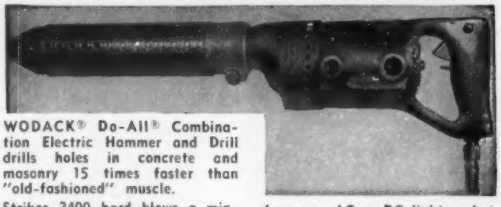

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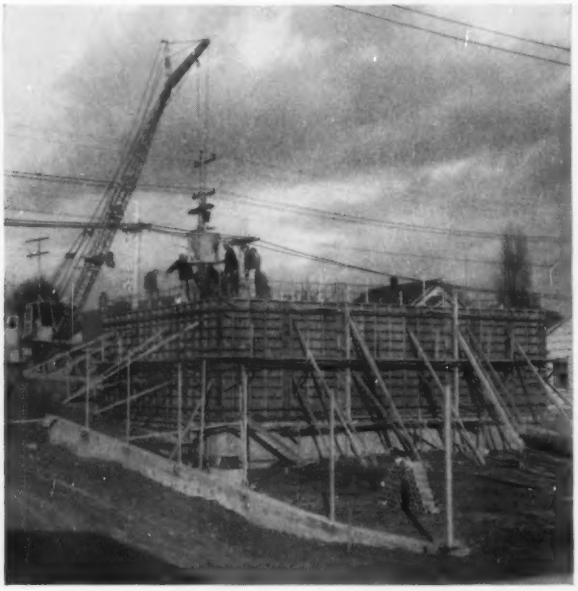

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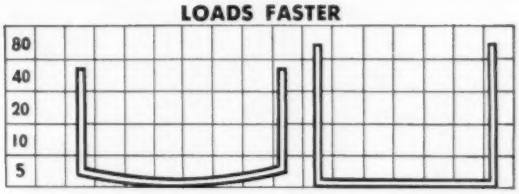
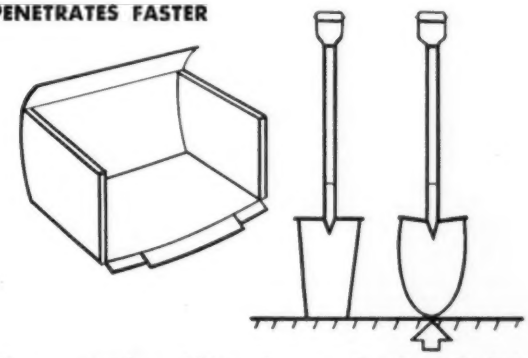


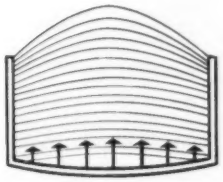
Tests have proved that loading resistance is largely determined by the height to which the load is built. That's why the lower, wider bowl of an Allis-Chalmers Motor Scraper requires less time and power to get the same yardage.

PENETRATES FASTER



The penetrating ability of a round-end spade helps illustrate how the curved and offset cutting edge on Allis-Chalmers Motor Scrapers concentrates all the horsepower on the center section during initial penetration.

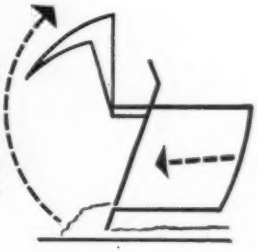
HEAPS AUTOMATICALLY



The combination of slightly deeper center cut and correctly angled cutting edge shapes the load as the scraper fills. The greater volume of dirt flowing into the center of the bowl "boils" forward, to the rear and to the sides, producing an automatically heaped load without excessive spillage.

SPREADS EVENLY

Forward movement of ejector is timed with lifting action of apron, which provides a continuous flow of material to insure a smooth, even spread. High apron lift prevents any possibility of material's jamming.



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